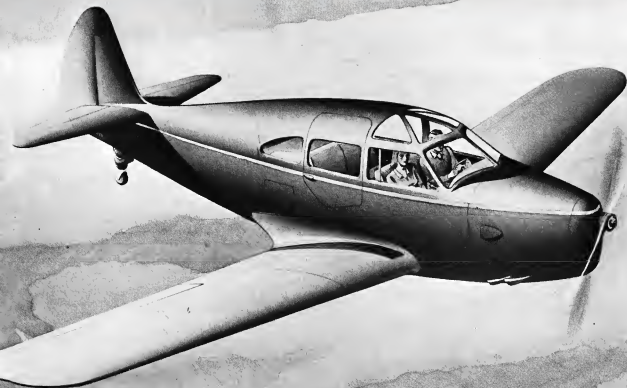


# Aviation News

McGRAW-HILL PUBLISHING COMPANY, INC.

DECEMBER 11, 1944



*New Fairchild Post-war Bid: Already a strong contender in the cargo plane field with the C-82 Packet, Fairchild is building a prototype of the M-84 personal plane and has set up a sales organization to market it. Four-place, it follows the popular trend toward low-wing, high-visibility planes for private flyers. It will be in the medium price range.*

## **Groundwork for World CAA Laid at Chicago Conference**

Main objectives of international aviation parley accomplished, despite inability to attain full agreement for permanent convention.....Page 7

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More than 1,000 attend conferences, hundreds with personal planes; over 100 exhibition booths in operation.....Page 9

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Experiments continuing on earlier two-place craft, with a third model—a four-place "family plane"—reported in mock-up.....Page 23

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Examiner asks 595 new route miles from Columbia, S. C., to Detroit; urges Board to extend Delta system from Cincinnati to Chicago.....Page 50

## **Constellation's Five-Year Development Is Described**

Results of exhaustive design tests will find extensive use in larger post-war aircraft, C. L. Johnson tells Institute's Los Angeles meeting.....Page 43

## **Fairchild Builds New 4-Place Prototype for Post-War**

Company setting up distributing organization to handle sales of new M-84, low-wing monoplane, for medium-price field.....Page 10

# CHUTING BULLETS

into firing position

with strong, lightweight

## MICARTA

**PULLEY** of Micarta entered life of both pulley and cable. Millions are now in use in Allied aircraft.

**ANTENNA MASTS** of Micarta hold the antenna taut without yield or warble. . . . withstand wide extremes of pressure and temperature.

**ENGINE RACKS** have been successfully molded of Micarta. . . . furnish as reliable example of Micarta's strength and the skill of Westinghouse engineers in ultimate molding assignments.



Bullets for a plane's chattering wing-guns are stored in long, looping belts. To guide each bullet accurately into firing position, plane makers are now using chutes formed of **MICARTA**—"444", the light, strong sheet plastic. Here's why:

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**MICARTA** rates high in flexural, compressive and impact strength. In high altitude flying, as temperatures decrease, Micarta acquires added tensile strength.

**MICARTA** "444" is easily and quickly produced with inexpensive wooden molds. Shots are subjected to heat and pressure, and formed into strong, intricate shapes. This new Micarta "444" was originally developed for the aircraft industry and is now accepted for use as trim tab flaring, accumulator covers, aviator's chest cases, fuelage tailwheel housing, winggun ejection chutes. For further information, send a copy of the New Micarta Data book (B-3184 A) write Westinghouse Electric & Manufacturing Company, East Pittsburgh, Pa., Dept. 7-N.

2-6038

## THE AVIATION NEWS

# Washington Observer

**STATE DEPARTMENT AVIATION**—Nomination of W. L. Clayton as Assistant Secretary of State responsible for aviation among other matters ran into some Senate opposition, although not from an aviation point of view. Generally overlooked in comment on the State Department reorganization transfer as Clayton is concerned was the fact that he would report directly to the President. The rumor, of course, that the White House will direct our international aviation policy.

**BERLE'S RESIGNATION**—Clayton, succeeds Adolf A. Berle, Jr., whose resignation was announced in Washington before the completion of the Chicago conference—a procedure that caused some eyebrows raising in the Capital. It was generally agreed in Washington that Berle did a diplomatic job at Chicago and that he was thoroughly cognizant of the widespread implications and excessive reverberations incident with the development of aviation. While some of his views have been criticized, they have been widely known. Although little mentioned, Clayton has had considerable experience as international aviation in previous government posts and almost unmatched experience in international trade as a private business man.

**ASPIRIN DEPARTMENT**—Release received recently from Wright Field and from the War Department in Washington, both of the same date, concerned the Norden bomb sight. From Wright Field—"When the plane has reached the correct point of release as calculated by the computer, the bomb sight automatically releases the bombs." From the War Department—"When

the angle of release reaches the computed dropping angle the (the bombardier) presses an electrical release button which drops the bombs singly or in train." How's that again?

**SURPLUS EQUIPMENT**—Aviation trade school circles are working on a proposal that schools be permitted to acquire surplus engines, airplanes and equipment on a low rental basis for training use only. Public schools will get equipment on low-cost or no-cost basis and aviation schools feel they also should get consideration, although they realize it will not be possible for them to get it on the same terms.

**RECONVERSION**—Manufacturers of transport planes are engaged in use their modification centers overseas for reconversion of transport and other types of planes sold abroad as surplus. Washington officials note cold reception at first, now any builder participation is looked upon more favorably.

**PLANE NEEDS**—Washington does not want used transports to be turned over to foreign airlines unless they are in top-notch shape and feel it is to the advantage of American manufacturers to be in touch with the people who will use the planes, both to uphold American prestige and to give them a sales "in" for future business.

**COMBAT TYPES**—First equipment for new six forces of liberated nations probably will come from United States in one way or another, and here, too, Washington desires want to make

Latest view of Letter-Kaufmann Aircraft's CG-10A glider



IN THE *Air* —

.. ON THE *Ground*

**GAIDESON HEATS THE COLD SPOTS**

• Whether it's a B-17 coming over the target at 30,000 feet with the outside temperature at 60° below or a flight officer or hangar shop on the steps of Midwestern Airlines in the dead of winter, Gaideson heaters get the job done once efficiently. The system that supplies and distributes the heat that warms the hearts of the gunners in many of America's flying fortresses throughout the world is Gaideson Heat. The same still that produces the Gaideson Aircraft Heating System is now producing the Gaideson Model B-101 Oil Heating Unit.

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PLANE RETURNS—Fact that domestic airlines received all of the first batch of C-53's and Libmasters available does not mean that this will be repeated in subsequent allocations. Foreign airlines are going to get planes they desperately need where they will help in the war.

circles are inclined, however, to play available transports close to the chest because of the sparse achievements of the Chicago conference. It became obvious at the conference, and in other negotiations, that a hard-boiled attitude is going to be more necessary than ever in dealing with countries outside the Western Hemisphere. As a result, domestic airlines may benefit greatly. You don't give blue chips to a man who is dodging from below the table.

ance of a recent statement designed to clarify current policy and re-emphasize urgency of war production and the fact that reconversion must not interfere with war production was overlooked generally. It was the first time in the war that a document on an important matter was signed by the four leading war agencies—WPA regional directors, War Manpower Commission regional staffs and area directors, Army

total of 770 aircraft would be available for commercial traffic and feeder airlines comparing with 200 ports now designated as restricted air carrier stops. A total of 189 of these 202 bases would be improved, with 11 replacements and use supplemental field construction. Of 634 ports in applications for improvement, 434 proposals for improvement at 378 fields. In addition, 150 airports listed by CAA as "major ultimate feeder stop" number 40, of which 633 would be improved. New airports would be built at 200 "major ultimate feeder stops."

Air Transport Command now has close to 100 base-organized transports in regular operation over the Pacific, and probably 20 or 30 more will be added. Alaska alone has 100 "major ultimate feeder stops."

Service Forces regional directors, and WPS, Army, Navy and ABCO and W36C Members of Production Emergency Committee. Washington officials regard it as a real accomplishment and of great significance in working out some of the difficulties in the period which lies ahead.

[illegible]

take years for liberated nations to rebuild technological resources to enable them to keep up with an program, and the American and British markets will be the chief source of planes. Payment is something else again—probably modified lend-lease will be necessary. The point is that, whether this country can get paid or not, the countries cannot be left absolutely helpless in the air. It will be a situation requiring the highest diplomacy.

✈ Weather has failed to interfere seriously with the ATC North Atlantic operations conducted by the U. S. airlines under contract and by regular ATC pilots. Since last December 1, March 1944

Five planes were lost enroute to March since there were 846 departures from the U. S., three of which were lost. During the same period 850 combat planes were forced overboard in this area, and 19 were lost. The large difference is charged up to differences in training between transport and combat pilots.

✱Stinson's newly announced Voyager 125 may be joined by a two-plane ship after the war but no attempt will be made to compete in price with smaller two-plane craft. Like most other light-plane firms, Stinson is giving close study to a design for three-engine, medium-range ship.

✶ Latest employment figures from several leading airlines show American with 1,614, Braniff with 1,181, Continental with 424, excluding modification plant, Delta with 623, Mid-Continent with 374, TWA with 4,372, United with 4,281 and Western with 387.

# The Birdmen's Perch

By **Majors Al Williams, ALIAS, "TATTERED WING TIPS"**  
Gulf Aviation Products Manager, Gulf Bldg., Pittsburgh 30, Pa.

Merry Christmas  
from Major Al Williams  
Flutter, and the  
Gulphawk



KEEP YOUR EYE PEELED FOR "LITTLE KNOWN FACTS ABOUT WELL KNOWN PLANE'S," A REGULAR DEPT. IN EVERY ISSUE

And a special Merry Christmas to three new P-47s (see) for the Little Known Plane Above: Well Known Plane Below. Your Christmas cards are in the mail, boys, and only four more Little Known Planes will get you presented to Junior P-47s. Please send your "Facts" to us at the address up above.



The P-47 J carries a bigger bomb-load than a "Foxy"—11,500 lbs.  
See **JOHN E. SERVICE, P-47 Pilot**  
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The P-47 has an in-line engine. Does not! The 47 was originally given no in-line—the P-47 B was the first to have a radial!

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Please have already been made to convert the P-47 into a power, cargo-passenger job with a new fuselage.

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GULF AVIATION PRODUCTS

VOLUME 2 • NUMBER 20

Aviation News  
McGraw-Hill Publishing Co., Inc.

December 11, 1944

## Basis for World Agreement At Chicago Civil Air Conference

Main objectives of international aviation party accomplished, despite inability to attain full agreement for permanent convention; interim council set up.

By MERLIN MICKEL

Early appraisal of the accomplishments of the International Civil Aviation Conference, which ended last week at Chicago, indicated that the five-week meeting did most of the things for which it was called. It explored the possibilities of future international agreement on air transport and set up an interim organization to continue its work pending a final treaty.

Observers who termed the meeting success to failure were using relative terms. It was able to go further than was thought possible at the outset, yet was unable, despite long and close discussion, to attain the full agreement for a permanent convention that appeared at least a remote possibility at times during the conference.

**Provisional Group Set Up**—The provisional international organization, which will have headquarters at Montreal, is established until the permanent convention becomes effective, in as event longer than three years. The interim council will be composed of 21 states, and among other things will establish interim committees on air transport, air navigation and international convention on civil aviation.

Member states elected to the council are in three categories. Those of chief importance in air transport, those not otherwise included which make the largest contribution to provision of facilities for international civil air navigation, and those not otherwise included whose election will insure that all major geographical areas of the world are represented. In the first category one blank was left, presumably for Russia. Others in this group are the U. S., United Kingdom, France, Netherlands, Brazil, Mexico and Belgium.

In the second group: Canada, Cuba, Norway, Iraq, and Peru. In the third: China, Australia, Czechoslovakia, Egypt, Turkey, El Salvador, Colombia and Chile.

At the last session of the conference Thursday morning, Norway offered to resign its interim council seat in favor of India. Cuba made a counter offer that she resign, since Norway's resignation would reduce the European representation to five. This counter offer was accepted, though it reduced the Latin American representation on the council to six.

**Seat to Be Decided**—Canada and France have applied to become the seat of the permanent international civil aviation organization. This is to be determined, however, at the last meeting of the interim body when it goes out of existence, when the permanent convention takes effect.

This convention, if treaty, which of course will be subject to ratification by the governments of the

signatory states, is a document of 98 articles, notable for the fact that, despite its length, it contains clauses to govern scheduled air transport, due to the failure of the U. S. and United Kingdom to ratify their respective treaties.

The times over extent of freedom of the air, which sent the U. S. and Britain into a stalemate, will continue to figure in international discussions, they were not allowed to die. But the British were successful in keeping the freedom issue in a separate document, and it was on their motion that the interim body takes for study and recommendation all the unfinished business bearing on the convention. The U. S. was its major point, on the other hand, in the main convention, which would set up an international organization with advisory capacities and without broad political and economic powers.

**Freedom of the Air**—To make those limited claims available, two agreements on freedom of the air were submitted. One embodied two freedoms, the right of free transit and non-stop landing. The other added three freedoms to these, granting mutual right to commercial air and intermediate traffic pickup.

Thus three emerged from the conference as interim organizations, a proposed permanent convention which would take effect



UNIVERSITY OF ILLINOIS AIRPORT:

This exclusive view of the airport on miles from the Illinois Union Building on the campus is the center of the University's aeronautical laboratory. It is designed to implement a comprehensive program of aviation education and research and to provide convenient and prompt landing facilities for the prevention of air transport and national defense. It has an area of 762 acres, three runways 5,300 feet long, 150 feet wide paved with concrete; taxiways 50 feet wide with total length of 12,000 feet. Construction agency was Civil Aeronautics Administration.

39 days after ratification by 26 states, and as separate expressions, the two agreements on freedom of the air, are more limited than the other.

**Route Form Adopted**—It adopted a standard form of route agreement, recommended for use in bilateral negotiations between countries. Unable to sign the "freedom" agreements, it also referred to the interim control matters in which it could not reach agreement, recommended only consideration of an international conference on private international air law, looking to a convention on transfer of title to aircraft, and proposed early resumption of assistance suspended by the committee (CITEIA) created at the first International Conference on Private Air Law at Paris in 1923.

Adolf A. Berle, Jr., president of

### Plan World ATA

Thirty-four representatives from 26 nations met in Congress of a meeting of international airline operators held last week at Chicago to discuss formation of a world-wide Air Transport Association.

Held Thursday at Hotel Sheraton, headquarters for the International Civil Aviation Conference, the meeting resulted in appointment of an eight-man committee to draft by-laws. The committee will start work this week at Hotel Carlton in Washington.

On it are John C. Cooper, vice-president of Pan American Airways; John Sinter of Eastern Airlines; George A. Laury, chief of the French Airline; Louis Col Ferdinand Ploech, chief of the French Air Transport; Charles de la Roche, chairman of the Air Communications Committee of the Polish State Air Council; and former managing director of "Lof" Air Lines, Maj. J. B. McCordie of BOAC; the Adair, British general manager of Swedish Air Lines; Col. Pedro A. Chaga, chairman of the Cuban delegates to the conference; and Luis Macho, technical adviser to the Cuban delegates.

Admiral will be Dr. J. Goodrich, secretary general of International Air Traffic Association; W. F. Murphy-Jones of the Conference of International Air Traffic Organizations; and Edgar S. Gornell, president of Air Transport Association and Albert Hoyer, secretary-general, ICAO.

The conference and head of the U.S. delegation, summed up the meeting's work: "If we have not achieved our objective at least it is the beginning of the end of the anxiety that has hitherto prevailed." Again, he said the conference had advanced international aviation 20 years. President Roosevelt wired "heart congratulations" to the conference at least it is the beginning of the end of the anxiety that has hitherto prevailed.

## 20 Douglas C-53's Allocated To Domestic Airlines by SPB

Additional planes expected to be available before end of year; about 30 more to be declared surplus and turned over this month including some Lockheed Lodestars.

By WILLIAM G. KEY

Twenty Douglas C-53's were allocated to domestic airlines by the Aviation Division of the Surplus Property Department last week. Additional planes will be available before the first of the year, some of which will be assigned foreign airlines. Probably not more than 40 will be declared surplus and turned over this month.

The allocations came less than one week after the planes were turned over to SPB. The planes will be turned over to the airlines to which they have been allocated almost immediately, and without waiting for completion of the details of sale.

**Allocations**—Airlines obtaining planes from American Airlines, Ford, United Air Lines, three each to Pan American, Eastern, Northwest and TWA, one each to Pan American-Grace, ICA, Braniff, and Western Air Lines.

As for the rest of the group in the next allocation will be Lockheed Lodestars. The Aviation Division, headed by Lt. Col. William B. Harding, announced that type planes have been set for the various transports, with the C-53 type price being \$109,000 and the Lodestar price being \$88,000. Other prices are: \$105,000 for the C-47; \$40,000 for the C-18, which is the DC-2; \$55,000 for the Lockheed C-53, which is the Lodestar; \$40,000 for the Lockheed AT-18, which is the Lockheed Hudson; \$48,000 for the Lockheed UC-48 and \$12,400 for the Cessna UC-78. The Beech is not expected to be available during the European War, and the Lockheed Radios and the Cessna UC-78 have not been certified for commercial use by the CAA. The Hudson is now undergoing tests and necessary modifications are being engineered for the Cessna.

had advanced international aviation 20 years. President Roosevelt wired "heart congratulations" to the conference at least it is the beginning of the end of the anxiety that has hitherto prevailed.

**Cost to Airlines**—It is anticipated that not cost to the airlines of the C-53 will be less than \$100,000. The C-47, the second most type plane is the price for the planes is good operating condition and equipped, except for radio and automatic pilot, for commercial passenger service. New prices will reflect allowance for conversion and repair, with the conversion allowance running from \$20,000 upward.

### Duggan Elected

Thomas A. Duggan, Thompson Products, Inc., was elected president of the Aviation Division of the National Aeronautics and Manufacturers Association at St. Louis last week, succeeding Ray Snyder, Ryder Air Lines.

Other officers: R. V. Trader, of Bob Trade Aero Supply, Pittsburgh; and Richard S. Thompson, of Sunbeam Brothers, Little, Pa., vice-presidents; George A. Penley, Philadelphia, selected secretary-treasurer.

Snyder was named to the advisory board of New ADMA Council, headed by Lt. Col. National Screw & Manufacturing Co., Cleveland; D. G. Tynes, Electric Storage Battery Co., Philadelphia; George Wilson, Glidden Co., Chicago; R. B. Ellis, Continental Motors Corp., Mankato, Minn.; Sydney Mehlitz, Lear Air, Inc., New York; R. B. Kestly, Air Associates, Inc., Dallas; L. G. Munn, Aviation Supply Co., Houston; G. H. Van Deusen, Van Deusen Aircraft Supplies, Minneapolis; W. F. Scott, Jr., Supply Distributors, Inc., Chicago; and Rudy C. Mueller, Grubb Aircraft Co., Omaha, Neb.

## Air Industry's Progress Reflected In NATA, ADMA Meetings

More than 1,000 attend conferences, hundreds with personal planes; over 100 exhibition booths in operation; landing strip demonstrated in St. Louis' Forest Park.

By ALEXANDER MCGURLEY

Greatly increased attendance and enlarged displays at the combined National Aviation Trades Association and Aviation Distribution and Manufacturers Association meetings at St. Louis last week offered tangible evidence of the growth and important aviation made by non-scheduled aviation within the past year.

Attendance was well over the thousand mark, and there were more than 100 exhibit booths about the Jefferson Hotel, convention headquarters. Demonstration of the airport of tomorrow by use of a temporary landing strip at Forest Park called attention to the gathering, while hundreds of personal planes at airports in the St. Louis area indicated that the gathering was truly a "fly-in" meeting.

Significant points from addresses and discussion in the four days of the convention sessions may be summarized as:

**Need for immediate planning** for adequate public air force. Warning against over-exaggerated expectation of an immediate personal aviation boom unless more tangible personal planes and more landing facilities are ready.

**Leader and more insistent demand** for more vigorous slashing of federal red tape regulations which most delegates believe are hampering personal aviation.

**Expectation** that most personal plane buying will be in the installment basis, with an urgent need for more reasonable financing of insurance his airport, direct the public to it with signs, install accounting systems, use an advertising agency, display his merchandise attractively, set sales quotas and show courtesy and consideration in flight training to his customers.

**Leslie Neville, editor of Aviation**: The health of our national economy depends upon willingness of most significant talk, probably, was that of William A. M. Burden, Assistant Secretary of Commerce, read in his absence by his assistant, George Burgess, and re-

ported more fully elsewhere in this issue of AVIATION NEWS.

**Digest of some other speakers' comments:**

**Benjamin Turner, NATA president**: Continued efforts of an aviation industry in increasing war training contracts have resulted in a healthy, vital condition of non-scheduled aviation now ready for the future. Public awakening of potential of aviation as personal transportation is both gratifying and disturbing. There are many problems to be solved before our product can gain widespread acceptance. A large scale program of public education is needed. ADMA, president: The basic idea manufacturers must keep in mind is utility. Training methods should be simplified. Pilot licensing red tape should be done away with. Weather, smoke and haze problems present a real challenge to engineers. When production increases, our prices will come down.

**R. W. Lewis, WFB Aircraft Division**: Essential civilian aviation requirements will be given every consideration by WFB. Schedules for civilian production have been issued to U. S. Steel Corp., General Motors, G. L. Lewis Co., Fabrik Manufacturing Co., Victor Manufacturing Co., Grumman Aircraft Engineering Corp., and Schweizer Aircraft Corp. Several new cases are under consideration.

**R. V. Trader, Pittsburgh**: Private aviation airport operator must use all airport revenue sources, including his airport, direct the public to it with signs, install accounting systems, use an advertising agency, display his merchandise attractively, set sales quotas and show courtesy and consideration in flight training to his customers.

**Leslie Neville, editor of Aviation**: The health of our national economy depends upon willingness of most significant talk, probably, was that of William A. M. Burden, Assistant Secretary of Commerce, read in his absence by his assistant, George Burgess, and re-

airplane models are the same as those of yesterday and they had better be different tomorrow.

**R. D. Hicks, Continental Motors**: The workload must grow from 12 to 24-hour service to dealers in parts and accessories, thus limiting their areas to a radius of 300 miles maximum from their houses. They should combine their lines to supply material, but not competing products.

**George A. Penley, ADMA secretary-treasurer**: Today the average civilian distributor handles the lines of 15 to 18 manufacturers, carrying in stock from 12,000 to 18,000 different items which are sold to 2,500 to 3,000 buyers. When industry expands after the war and new manufacturers enter the field, the situation will be further complicated by requirements from additional parts and equipment.

**James Garfield, chief, Federal Bureau of Aeronautics, DPC**: Failure of manufacturers to cooperate with the government in the disposal of surplus planes, plus public demand for early solution of surplus aircraft, necessitates a chaotic state similar to that after World War I. Transportation planes will be sold or leased where possible to operators opening new air routes to terminals not now adequately served.

## Wilson Heads ACCA

Eugene K. Wilson, vice-chairman of United Aircraft Corp., was elected president of the American Chamber of Commerce of America at its annual meeting in Washington last week, succeeding James P. Murray, Boeing vice-president and Eastern representative.

**Succeeding Wilson** as chairman of the board of governors was Donald Douglas, Douglas Aircraft.

Wilson will assume direct responsibility for Chamber of Commerce pending selection of a new general manager.

## Wyo. Port Conference

A statewide airport conference will be held Dec. 18 at the Casper Army Air Base, Casper, Wyo., at which representatives of Civil Aeronautics Administration, Civil Air Patrol and various airlines will speak.

Delegates to the conference will be guests of the Army at the air base, and the main luncheon address will be made by Col. Herbert Morgan, commandant at the base.

## Fairchild Builds 4-Place Prototype For Post-War Personal Market

Company setting up distributing organization to handle sales of new M-64, low-wing monoplane, designed for medium-price field.

A new low-wing, four-place personal airplane is being built in prototype by Fairchild and the company is organizing a distributing organization to handle sales of the post-war type. Fairchild Engine and Airplane Corp. reveals.

The new plane will not be designed for the low-cost market, and the company declares that it is still remaining for the immediate post-war period at least, in the medium price field.

The new M-64 is being designed for strength, long-life and ease of maintenance.

► **F-24 to Be Produced**—It also is disclosed that the company is planning to renew postwar production of the well-known F-24, a high-wing, four-place plane which would be powered with either a 200-hp Ranger in-line engine or a 185 hp Warner radial.

The M-64 will be powered with a Ranger 225 hp engine, indicating higher performance than the F-24, which is now being built in the war market as the C-51, UC-62A and UC-61K. The "K" model is the one now being re-designed for civilian production so that it could be produced in a sales market as soon as the War Production Board releases materials.

The M-64 prototype, expected to be test-flown in early spring, is one of a number of models in the design stage.

► **C-52 Bag Built**—Fairchild al-

ready is in the post-war commercial market picture with the C-52, designed and now being built in quantity as a military cargo plane. Fairchild's commercial objective in the cargo field was disclosed only a month ago when the first information on this large, cargo-carrying plane was revealed. The C-52 Pocket is in the 10,000 pound class, powered with two Pratt & Whitney 3000 hp engines in a passenger version, it can carry 70 passengers and in a model comparable to American commercial airliners, carry 36 passengers in reclining seats.

The M-62 is a development of the Curtiss PT-10 trainer, of which more than 3,900 were built at the Hagerstown, Md., plant for the Army Air Force, the British and Allied governments. The design indicates a low landing speed and ease of operation, the company states, with easy entrance and exceptional visibility in all directions.

► **Personal Aircraft Division**—Indicative of the interest with which Fairchild is approaching this medium-priced personal plane field is the corporation announcement of a new Personal Aircraft Division headed by Lee B. Smith to handle sales and other aspects of the smaller-plane field.

Smith has been manager of the Fairchild branch office at Washington, N. C., and has been sales manager for two other aircraft companies.

## Air Medicine Course

The College of Medicine at the University of Illinois is offering to the fourth year class the first integrated course in aviation medicine to be given by a college of medicine in the United States. The course is offered jointly by the Departments of Medicine, Surgery, Psychiatry, Ophthalmology, Gynecology, and Physiology. The Colleges of Medicine, Dentistry and Pharmacy at Illinois have made important research contributions to fields closely related to aviation medicine for more than a decade.

## WASP Training Program Terminated

The Women's Airforce Service Pilot's training program ends this week, which starts a two-week period during which the entire WASP utilization program will be discontinued, thus terminating the controversial element of the war's aviation program for women.

Utilization of women pilots was projected in 1941 by the AAF to determine whether, in the emergency which then threatened, women could serve as pilots and to perfect a nuclear organization; to release male pilots for high grades of duty, including combat, and to decrease the Air Force's total dependency on the over-all manpower pool. In mid-1941, Miss Jacqueline Cochran, Director of Women's Pilots, was charged with preparation of a plan to utilize trained women pilots and to train selected young women.

► **Defeated by Congress**—Efforts to militarize the WASP and make it a part of the AAF failed when Congress declined to act on Gen. H. H. Arnold's suggestion for such procedure.

A ceremony is planned each week at Avenger Field, Sweetwater, Tex., during which the AAF will pay tribute to the WASPs with top Air Force officers participating.

## AVIATION CALENDAR

Jan. 11—**Janet Montagu**, Industrial Engineering School of Massachusetts Institute of Technology, will receive the American Society of Mechanical Engineers' Distinguished Achievement Award for her work in the design of the first jet engine. (Continued on p. 12)

Jan. 12—**1941-1942 California Aviation Conference**, sponsored by the California Aeronautical Society, will be held at the Sheraton Hotel, San Francisco, Calif.

Jan. 13—**1941-1942 American Society of Mechanical Engineers**, will be held at the Sheraton Hotel, San Francisco, Calif.

Jan. 14—**1941-1942 American Society of Mechanical Engineers**, will be held at the Sheraton Hotel, San Francisco, Calif.

Jan. 15—**1941-1942 American Society of Mechanical Engineers**, will be held at the Sheraton Hotel, San Francisco, Calif.

Jan. 16—**1941-1942 American Society of Mechanical Engineers**, will be held at the Sheraton Hotel, San Francisco, Calif.

Jan. 17—**1941-1942 American Society of Mechanical Engineers**, will be held at the Sheraton Hotel, San Francisco, Calif.

Jan. 18—**1941-1942 American Society of Mechanical Engineers**, will be held at the Sheraton Hotel, San Francisco, Calif.

Jan. 19—**1941-1942 American Society of Mechanical Engineers**, will be held at the Sheraton Hotel, San Francisco, Calif.

Jan. 20—**1941-1942 American Society of Mechanical Engineers**, will be held at the Sheraton Hotel, San Francisco, Calif.

Jan. 21—**1941-1942 American Society of Mechanical Engineers**, will be held at the Sheraton Hotel, San Francisco, Calif.

Jan. 22—**1941-1942 American Society of Mechanical Engineers**, will be held at the Sheraton Hotel, San Francisco, Calif.

Jan. 23—**1941-1942 American Society of Mechanical Engineers**, will be held at the Sheraton Hotel, San Francisco, Calif.

Jan. 24—**1941-1942 American Society of Mechanical Engineers**, will be held at the Sheraton Hotel, San Francisco, Calif.

Jan. 25—**1941-1942 American Society of Mechanical Engineers**, will be held at the Sheraton Hotel, San Francisco, Calif.

Jan. 26—**1941-1942 American Society of Mechanical Engineers**, will be held at the Sheraton Hotel, San Francisco, Calif.

Jan. 27—**1941-1942 American Society of Mechanical Engineers**, will be held at the Sheraton Hotel, San Francisco, Calif.

Jan. 28—**1941-1942 American Society of Mechanical Engineers**, will be held at the Sheraton Hotel, San Francisco, Calif.

Jan. 29—**1941-1942 American Society of Mechanical Engineers**, will be held at the Sheraton Hotel, San Francisco, Calif.

Jan. 30—**1941-1942 American Society of Mechanical Engineers**, will be held at the Sheraton Hotel, San Francisco, Calif.

## Wind Tower Tests Spin Characteristics

Other previously impossible experiments underdone in new 30-foot structure at Wright Field.

Within the 30-foot concrete tower of Wright Field's recently completed vertical wind tunnel are conducted previously impossible tests for airplane spin characteristics, terminal velocity studies, parachute research and experiments with helicopter rotor blades.

Longest and fastest free-fall, open throat, vertical wind tunnel, the Air Technical Service Command's new aerodynamic test tube will result in great savings of dollars, working hours and lives of pilots. A 12-foot cylinder which runs up the center of the building serves as the test chamber. An upward airstream is sucked through the test section and returned down shaft and passed between the inner cylinder and the outside walls by a four-bladed wooden propeller 18 feet in diameter. It is turned by a 1,100 hp, electric motor mounted above the fan-like prop at the top of the tower.

► **Controllable Pitch Props**—Functions in airstream ranging from almost zero to more than 100 mph are accomplished by means of a controllable pitch arrangement on the propeller, rather than by changes in the motor speed.

Synchronized motion picture cameras located at the top and side of the test section record reactions of the plane models being tested. Wind speeds on the models range from two to three feet. The measurements are accurate to within 1/100th inch and balanced by weights to within 1/16th gram. Each free flying model contains a complete set of controls, including ailerons, flaps, rudder and elevators and are operated by remote control.

When the test is completed and the air flow ceases, the model drops into a nylon net stretched across the base of the test section.

► **Helicopter Tests Likely**—The vertical tunnel is expected to play an important role in the experiment and development of the helicopter. Mounted on a streamlines hub at the base of the tunnel, model rotor blades can be tested for vibration and stress analysis while subjected to simulated flight conditions created by up-sweeping airflow.

## "Not for Sale"

Officials of Allied Aviation Corp., Cockeysville, Md., have announced that the company is not in process of sale and that no proposal has been made by anyone with whom the company is in contact. The Allied Aviation group for the sale of that company.

It was reported in *Aviation News*, Nov. 27, that such a move was in process, based on usually reliable industry sources. The company recently constructed a pilot model of a small twin engine, bonded plywood amphibian, named the *Trimmer* for its designer, Gilbert Trimmer, who is associated with the company. The *Trimmer* was flown with apparently satisfactory results last summer.

## Allied Denies NWLB Pay Dispute Report

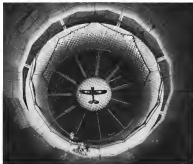
Allied Aviation Corp., Cockeysville, Md., has taken issue with an announcement of National War Labor Board which says the company refused to sign an agreement

with the International Association of Machinists, AFL, in connection with a case referred to the Board. The Board and the company and IAM had agreed on all terms of a contract, including wages. When the Navy canceled its contract with the company, the Board asked that the company then refused to sign the agreement with respect to wages and the case was certified to the Board as a dispute.

Allied officials report that the Navy, before, not after cancellation of the contract, had directed the company not to sign the agreement. The NWLB wage case, the company said, dealt with wage increases which the 1942 Stabilization Orders required to be submitted to the Board.

► **Wage Request Denied**—NWLB unanimously denied a request of Allied Aviation Corp. that a retroactive wage increase ordered for a six-month period become effective only after reinstatement by the Navy which had a contract-floated contract with the company during the period involved.

Allied officials said they had been advised by the Board of receipt of a communication from the Navy declaring it was prepared to reimburse the company.



ATSC's New Vertical Wind Tunnel: Exact scale models of newly designed planes are installed into the upward airstream of the Air Technical Service Command's new vertical wind tunnel at Wright Field. Looking from the base of the tunnel, this photo shows the polished upper surface of the lower test chamber, the nylon net into which the model falls at completion of a test, the free-flying model plane, and at the top, the thrust device which is a 14-foot propeller model used at speeds greater than 100 mph.

## L. A. Mayor Opposes State Aviation Body

Protests when asked to endorse plan involving proposed commission's control of post-expansion funds.

An indication of what may happen elsewhere in the opposition of Mayor Fletcher Bowron of Los Angeles to the creation of a state aviation commission. Proponent of Randolph Hill airport funds expects Bowron to oppose when asked to endorse the commission plan. Bowron wants no commission before when he applies for federal money for expansion of Los Angeles Airport. He made the point clear when William H. Rosenthal, chairman of the state assembly interim committee on aviation, insisted that the proposed state commission be the disbursing agency for whatever Randolph money pours into California.

No protests were heard in Los Angeles, however, against Rosenthal's suggestion that the state commission, when and if appointed, concentrate on California's need for an aviation legislative program. He believes the commission should have as objectives the drafting of laws for: 1) airport zoning; 2) airport building in state parks; 3) simple regula-

tions and licensing of commercial and private flying; 4) establishment of aviation mechanic courses in public schools; 5) state purchase of surplus aircraft equipment for school use.

**Bailing?**—Generally optimistic concerning post-war plans, Boeing Airplane Co. may be expected to enter the personal airplane market with a "family plane," probably to be built at Wichita with experience gained in production of trainers.

**Kaiser**—Efforts will be made to persuade Henry J. Kaiser to resume his interest in big flying boats. A variation of a twin hull design he already has considered and put upon the shelf may be suggested as a project to continue. In peace, the activity of his Richmond, Calif., shipyards. His reported withdrawal from the Kaiser-Bagges craft flying boat project is not convincing as an indication that he will leave to others the rules and venture of post-war aircraft building. However, some West Coast observers believe Kaiser is still highly susceptible to the idea of writing his name in the sky.

**Bagges' Best**—Bowed Hughes' Calver City hangar in which his "world's largest" flying boat approaches completion is under heavier guard than ever before. Reputed workers on the project, only those personally known to him and bearing passes with his

signature are permitted to view the airplane.

**Tragic Best**—Los Angeles taxpayers who soon may be called on to underwrite a heavy percentage of Los Angeles Airport expansion, to make it the city's aviation terminal, may be persuaded more easily by the memory of TWA's Dec. 1 crash near Lockheed Air Terminal.

The accident emphasizes the mental (for pilots) and aerial hazards of maneuvers that rim San Fernando Valley in which Lockheed Terminal is located. Precaution approaches are required. Airline officials will redouble their support of Los Angeles Airport expansion, hoping it is realized before they begin the use of four-engine equipment. The city's airport often long, unobstructed approaches.—S. B.

## IAS Plans Units In L. A., San Diego

Regional and headquarters buildings will be focal points of West Coast post-war aircraft research.

Institute of the Aeronautical Sciences will erect regional and staffed headquarters buildings in Los Angeles and San Diego with the intention of making them focal points of West Coast post-war aircraft research. Maj. R. H. Fleet, Institute president, made the announcement at a special meeting of the Institute in Los Angeles. A quarter-million dollars has been raised through industry contributions for the Los Angeles project. A \$140,000 building is proposed for a 25,000 three-acre site on Beverly boulevard, centrally located among the city's aircraft industries.

**San Diego**—At San Diego, a \$150,000 structure is planned and \$154,869 has been contributed for the building and incidental costs. The building will be at San Diego's municipal airport, Lindbergh Field.

The buildings will provide a permanent base for engineering meetings, research libraries, technical exhibit rooms and IAS administrative offices.

Major Fleet predicted that in post-war years the Institute will become increasingly important as a research agency widely sponsored by and representative of the aircraft industry. He said efforts are being made to develop similar building programs on the East Coast, to serve eastern aviation industries.



## How fast can De-lucers fly?

We couldn't go fast enough to find out . . . even in one of our newest fighters

SOME PEOPLE will be surprised to see R. F. Goodrich De-lucers on the Northrop P-61 Black Widow. They'll be surprised because they never thought De-lucers could stand the terrific strain of this fighter plane's speed.

New Type Eleven B. E. Goodrich De-lucers stood it all right. The fact is, under test, these De-lucers took all the speed the Black Widow could turn up . . . and operated efficiently.

We can't give you this speed. We

can say it was the fastest De-lucers have ever flown. And we still don't know how much faster they can go.

The important thing is that some of our new fighters are now going to have the "insurance" of De-lucers protection. For the Army has approved the use of Type 11 De-lucers for fighters, and they're already in production.

There are many reasons for the superior performance of these new De-lucers. Reinforcement in construction and

design have resulted in a smoother cross-section, better ribs, greater resistance. These De-lucers are lighter, less bulky, more ice-burner and cost less to maintain.

Perhaps you would like more complete data. If so, write to The B. F. Goodrich Company, Aeronautical Division, Akron, Ohio.

Shiny on Highway

B.F. Goodrich

FIRST IN RUBBER



## RADIO-CONTROLLED GLIDER BOMB:

This bomb was found near Paris and is the type used by the Germans in attacks against Allied shipping. It was first reported used off Salerno and the Anzio beachhead, with some success. The bomb is released from German aircraft and controlled by the pilot of the mother craft.

## U. S. May Finance Civil Pilot Training

Burdin discusses intensive plan under which 75 percent of cost would be paid by federal government.

A tentative federal aid program for post-war civilian pilot training outlined by William A. M. Burdin, Assistant Secretary of Commerce, would provide 75 percent of the total cost of civilian training who would qualify for a private pilot license.

The plan, outlined in a speech prepared for delivery at the National Aviation Trades Association convention at St. Louis, provided for courses given through colleges. The aid, it was estimated, would amount to approximately \$270 per student for men and women both of college and non-college standing. The tentative program would provide for contracts with non-profit institutions of college grade as sponsors and these would be re-

sponsible for making arrangements for flight training, either at their own fields in the cases of colleges and universities which have them or at nearby private training fields.

**High School Program.**—Burdin quotes an estimate of NATA Executive Director John Wilson that there are only about a dozen colleges in the country with their own flight training facilities. In states where there are few colleges, the program may be carried out through high schools through extension arrangements with colleges. However, Burdin believes aviation instruction at high school levels should be operated along lines of the Waccamaw plan which concentrates on classroom aviation work, supplemented by four hours of flight training as laboratory experience.

He reports that many schools themselves appear ready now to meet the cost of such a program, offering immediate business to flight training operators, and opportunity for further sales of flight time to graduates. No proposals for such federal aid have yet been placed before Congress.

**Defends Regulations.**—Burdin challenges statements that personal flying's growth would be stimped by federal regulation as "foes and dangerous thinking," asserting that the men in CAA and CAB concerned with safety regulation "recognize their responsibility to operate less as policemen than promoters."

He denies that they "dream up arbitrary rules for annoyance of flyers," and calls for better cooperation of the "regulated" in responding to elucidated questionnaires on proposed new regulations.

## Expand B-24 Output

Production of Consolidated B-24 Liberators at Ford's Willow Run plant will be stepped up under a new Army schedule which calls for an output only slightly under that of last spring and summer and production at the present rate at least until next spring. This week will see the 7,000th Liberator off the Willow Run line. The first Ford-built Liberator came off two years ago last September.

More than a thousand design changes have been incorporated during the production of these 7,000 bombers, involving, Ford reports, more than a million fielding hours and more than a half million engineering hours.

## Plane Acceptances Drop in November

Bad testing weather, design changes and holiday slowed for decline.

Unfavorable weather for flight testing during the latter part of last month, some loss of production on Thanksgiving Day and design changes on a few types and difficulties in bringing new models into production all contributed to a below-schedule acceptance of aircraft in November.

The total output was 6,747, approximately 366 below the working schedule and output in terms of airframe weight was 71,800,000 pounds, exclusive of stores, a decrease of five percent from October. Although production by numbers was only four percent below schedule on an overall basis, WPA Chairman J. A. Krug said military requirements are not being satisfied to the extent of 46 percent.

**Long Range Bombers.**—Production of four-engine long range transports was particularly disappointing, Krug said. One new carrier-based torpedo bomber and two Navy patrol plane producers missed schedules by a wide margin.

Planned output of these planes is, at present, relatively small, but failure to achieve the early objectives will reflect unfavorably on future production, where the schedule runs sharply. Krug said these three Navy types are considered critical and progress is being watched carefully.

Commenting on other phases of the month's acceptance, Krug called standard bomber and medium transport production satisfactory, while some fighter acceptance was below par as a result of poor test-flight weather and design changes. One naval reconnaissance type was behind schedule because of problems encountered in bringing a new model into production.

**Schedules Revised.**—It should be pointed out that constant revisions are made in the working schedules so that they might conform as nearly as possible to production probabilities, in order to avoid imbalance in the production and allocation of aircraft material, equipment and component parts. The practical achievement of a schedule in a particular month is not conclusive, WPA says, since at the same time, production may be far



Our little dust-eyed "friends" are leaving, the hard way, how decidedly unlambly it is to tangle with one of the Navy's big Consolidated Liberators. For these Liberators are not only great ships ... they are manured by keen-eyed, straight-shooting, "hell-for-leather" American boys who like nothing better than to get a Nip flying boat, such as the one pictured here, in their sights.

It is gratifying to us here at CECO to know that CECO carburetors and fuel pumps on these newest great Liberators are doing their part in helping our fighting men beat a path to Tokyo. And we pray that the day is not too far distant when once again CECO products will be earmarked for airships rolling off peacetime assembly lines.

**CECO**

**CARBURETORS  
FUEL PUMPS  
PROTEK-PLUGS**

**CHANDLER-EVANS CORPORATION** SOUTH MERIDEN CONNECTICUT, U. S. A.



short of approved requirements. As an example, Krug cited November production of Boeing Superfortresses which actually exceeded the monthly revised production schedule by a small amount. However, the schedule was roughly 38 percent below the number desired by the AAF last month to maintain the activation schedule of B-29 groups for the war against Japan.

## Lack of Equipment Curbs Flight Tests

Delay in certification of surplus service planes at Bush Field, Augusta, Ga., forced to inadequate facilities.

Flight tests necessary for certification of surplus service planes are under way at the Civil Aeronautics Authority's new base at Bush Field, Augusta, Ga., but are being hampered by lack of maintenance equipment and mechanics. The Defense Plant Corp. has been authorized to supply the equipment and personnel, but it is understood this has not yet been completed.

One instance of the difficulty is expediting the tests as sought by the Air Corps. GAA sources say, in that of a Lockheed 14 that was thrown on its back because of lack of field in a broken, and which cannot be repaired until parts are obtained to right it.

**Seven Types Tested**—However, seven types of planes are now undergoing tests. They are Lockheed AT-18A, AT-38 and A-29; being PT-17; North American BC-16; Cessna 441; and Douglas RB-1 and UC-47, both mid-wing planes of bomber construction.

There are more than 40 types of surplus 100 reported to surplus that have never been tested, although some of these are experimental, one-of-a-kind types that will not be sold.

Surplus plane sales generally are not having as fast a turn as they were while the supply of DPC-owned light planes listed, since the bulk of offerings today are in the heavier trainer category.

**\$2500 Sold**—In all, approximately 7,640 surplus planes have been sold with less than 40 of the DPC planes out of 2,369 remaining. Some 800 Army planes have been sold. Only 136 of these have been the primary trainers, however, the balance being chiefly liaison types. Surplus gliders have been dis-

## Renamed to NACA

Dr. Jerome C. Hunsaker, president of Massachusetts Institute of Technology, and Dr. W. F. Durand, of Stanford University, have been reappointed by President Roosevelt as members of the National Advisory Committee for Aeronautics for five year terms.

Dr. Hunsaker, a specialist of international reputation, has been chairman of NACA since 1941. Dr. Durand, professor emeritus of mechanical engineering at Stanford, is one of the original members of NACA, having been appointed by President Wilson in 1915. He is now chairman of the NACA subcommittee on jet and turbine power plants.

speed of, bringing return of \$8,700 to the government, an average of approximately \$124. Some of those sold are suitable for glider use, others valuable for spare parts for Piper, T-6, and other aircraft light planes.

There is some prospect that additional light planes will be available soon, although not in large numbers. Many of these are surplus in offerings of the primary trainers and other heavier trainers indicates that many will be transferred to foreign fields to meet demands on post-war training programs.

Industry sources feel that the only answer to the problem of the heavier trainers is their use in a post-war program, since they are not satisfactory for private operation both from a cost and expense standpoint.

Few of the planes released by the Army to surplus have been of types that find a ready market, and for that reason it may be expected that sales will not be heavy in relation to the numbers of planes listed. Many of the transport types theoretically available for allocation cannot be certified without modifications and most of them were built either as combat planes or combat trainers. Most can be converted eventually for commercial use, but are not desirable for that purpose.

## Visit Pacific Bases

Nine members of the Naval Affairs Committee of the House left last week on a three-week trip to visit major air and ship bases in the Pacific war area.

A second trip is scheduled to leave after the first of the year. Making the first trip are Rep. Belforians (D., N. Y.), Representative (D., Ill.), Price (D., Fla.), Helverding (R., Pa.), Blackmer (R., Mich.), Ward Johnson (R., Calif.), Grant (R., Ind.), Margaret Chase Smith (R., Maine), McWilliams (R., Conn.).

## Ask Tax Law Change To Ease Conversion

The Aeronautical Chamber of Commerce has recommended a simplification of the Federal income tax procedure as a means of enabling the aircraft manufacturing and other industries to better survive the reconversion period.

It is the view of the Chamber that companies whose war production has substantially ceased and who anticipate drastic reductions in earnings should be given the right ultimately to offset against accrued taxes, the benefits to which they will be entitled under the carry-back and post-war credit provision.

**Procedural Change**—The Chamber feels further that the accumulation of these taxes requires merely a procedural change in present laws and that the amount of taxes ultimately to be paid, and as a consequence the ultimate revenues to the government, will not be affected.

## New Super Planes

Existence of several experimental airplanes, generally known in the industry but not published, was disclosed in recent testimony given before the House Appropriations Committee by Dr. George W. Lewis, in Director of Aeronautical Research for the National Advisory Committee for Aeronautics.

Dr. Lewis mentioned specifically the B-35, the B-36 and the B-42 and described the B-36 as the largest airplane that has been attempted in this country. He said one wind tunnel at Langley Field has been devoted entirely to the B-35 and the B-42 during the past year.

He testified, too, to investigations and experiments being made in the application of gas turbines and jet propulsion units and said there is a large number of these types. Detailed discussions were off the record.

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As pilot of your own craft, you are invited to use the facilities of the new Curtiss-Parks Airport. Our organization, Airpark, hangars, and shops, are at your service. We're to help you get the maximum use, the greatest pleasure and all-around satisfaction out of your plane.

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It is our purpose at Curtiss-Parks Airport to be sure that when you again take to the air, it will be with the complete confidence in your craft that only thoroughly efficient and dependable service can give. Make Curtiss-Parks your St. Louis home.

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**YOUR PERSONAL PLACE OF TOMORROW**

The Escape, the personal place destined to bring everyday personal flying into the daily lives of hundreds of thousands of Americans, is to be featured by Parks Aircraft Sales and Service. The Escape, with but a single control, a wheel, is designed for safety, ease of handling, and economy. The Escape cannot spin, stalls like an automobile, gives 30 to 25 miles per gallon of gasoline, and flies 65,000 miles or more before the engine need be overhauled. Write for details.

## Geuting Sees Port Plan As Inadequate

CAA program meets only most pressing needs of larger cities, General Aircraft official declares.

The proposed CAA national airport program covers only the most pressing needs of the larger communities and represents but a small percentage of landing facilities actually needed throughout the United States, in the opinion of Joseph T. Geuting, vice-president of General Aircraft and chairman of the Personal Aircraft Council, ACAA.

Speaking before members of the Aviation Distributors and Manufacturers Association at their St. Louis convention, Geuting estimated that need of the proposed 3500 new airports, which would make a total of 4700 facilities open to private flying, every community in the nation of any size—14,193 of them—will require at least one field (personal airport).

**Wants Red Tape Cut**—He reiterated the demand of the Council for sane and sensible relaxation of government red tape which he contends is still hampering and restricting private flying, pointed to increased utility of personal aircraft, and urged that surveys of potential markets should take into account the potential buyer's position for a personal plane for business purposes.

Pointing to discrepancies in

### New Stinson

A new Stinson plane—the Voyager 124—was demonstrated in St. Louis, Mo., last week. A three-place ship, it is powered with a 125 hp. Lycoming engine, and cruises at 112 mph, using 83 percent of power.

First of the post-war series of the Stinson Division of Consolidated Vultee, the plane combines attributes of the pre-war Stinson Voyager 336 and the "Flying Jeep" built for the Army as an observation, utility and ambulance plane.

Totaled run, with flaps down, is listed at 545 feet, landing roll 263 feet with flaps down, and stalling speed of 51.5 mph with flaps down.

Wing span is 34 feet, fuselage length, 33 feet six inches. Gross weight is 1,275 pounds, with useful load of 725 pounds. Service ceiling is listed at 14,000 feet.

current personal plane market surveys, Geuting emphasized the importance of building up the background of a potential customer, subject of a questionnaire, to a point where he had some definite ideas about personal plans, before asking him questions about his future buying plans.

## Writers Get Short Course in Aviation

Instruction given at East St. Louis by Parks Air College in two-control Ercoupe after one-semester ground training.

A short course in aviation, given by Parks Air College at East St. Louis last week found about 20 magazine and newspaper writers taking flight training after a concentrated ground school course which included elementary instruction in civil air regulations, meteorology, aircraft engines, navigation and related subjects.

First instruction was in the two-control Ercoupe, product of Engineering and Research Corp., Riverdale, Md., and many of the writers selected early without previously having been at the controls of an airplane.

**Solo Flights**—First to solo among the writers without previous flight training was a representative of House Beautiful magazine and others making early solo flights. Representatives of the Saturday Evening Post and The Chicago Sun, both of whom had flight time previously in conventionally controlled aircraft.

The representative of the Woman's House Companion, who had never driven an automobile, much less flown a plane, learned the five-hour Ercoupe solo requirement early.

**Post-War Significance**—These facts and the wide range of interest represented by the magazines and newspapers whose writers took the course pointed up emphatically and significantly the appeal of private flying and its possibilities in the post-war era.

Magazines and newspapers represented in the course, in addition to AVIATION NEWS and those mentioned, were: Life, Country Gentleman, Modernweek, Scholastic, Mechanics Illustrated, Automotive News, Ladies Home Journal, Aviation and Yachting, American Aviation, Flying, National Aeronautics, Air World, Southern Flight, Dallas News, and Chicago Herald-American.

## Briefing

For Private Flyers and Non-Scheduled Aviation.

By ALEXANDER MCSURELY

A new aid to sailplane pilots, developed by Lanier-Kaufmann, has some possibilities for use as a lightplane ship. The "Thermal Soar" as it has been called, enables the pilot to determine in what direction he must turn his motorless craft to take advantage of the warm updrafts. Basically it consists of thermocouples in each wingtip, connected with a recording dial on the instrument panel which indicates the temperature at the wingtips.

**Prophet Parks**—Oliver L. Parks, one of the more optimistic forecasters of aviation's post-war possibilities, anticipates great simplification of the navigation problems which now harass the neophyte personal plane pilot. Within a few years he expects "the price of automatic pilots from bombers has come down, as it has, from \$5000 to \$250, since the war has begun, I believe it can be brought much lower in a simplified form, to serve the personal plane at perhaps \$35."

**New Planes on Display**—Several post-war personal plane prototypes have arrived and are expected in St. Louis at the ADMA-ATAA Convention. Among them a souped-up revision of the Stinson Voyager with a 125 hp engine and a longer fuselage than the pre-war variety; the four-place Amphibious Amphibian, which was expected to give demonstrations on the Mississippi River; the three-place Johnson Rocket with 135 hp, the two-place Globe Swift.

**Growth Shows**—Best index to the growth of the personal plane industry in the last year is comparison of the displays at this year's ADMA-ATAA show with those of last year. Demonstrations today of the Convention Hall display two planes, an Aerocraft and a Laco-craft, both geared to mirror finish, while a Lanier-Kaufmann Yankee Doodle Two sailplane hangs from the ceiling. Meanwhile one second floor is largely occupied by displays, which for surpass, in quality and individual lavabness, the displays of the 1943 meeting. Forest Park strip Site of one of St. Louis' earliest airfields, in Forest Park, was reopened temporarily, as a personal plane landing strip, for the Convention.

## PAYLOAD IS PEOPLE OR PACKAGES



A most curious study of the Constellation's performance records indicates immediately that it can never be considered a one-job transport. Versatility is the word. Interiors, for instance, the Constellation is easily adapted to meet the commercial demand of the specific route, to carry its payload in terms of people or packages or both. Flightwise, it is able to operate most economically over the specific distance required—whether transcontinentally or as flights as short as 100 miles. Indeed, versatility is the word. Express, deeper or inner-city local, the Constellation is designed to solve special problems of the individual airline.

# *The Lockheed Constellation*

## SETS THESE NEW WORLD STANDARDS

Biggest load-carrying capacity of any transport

Longest range of any transport ✈ Fastest speed of any transport

Greatest rate of climb of any transport ✈ Highest cruising altitude of any transport

*And* these performances make the Constellation  
the *safest* of any transport

## *Leadership*

### IN LOAD-CARRYING CAPACITY

Lockheed's Constellation is a big plane—big enough, in fact, to carry 64 passengers and their baggage. In addition, it has adequate space for mail, express and cargo. Two compartments totaling nearly 500 cubic feet are available and may be loaded and unloaded *underneath* the plane. Revenue loads of approximately 18,000 pounds can be carried easily by the Constellation on medium-distance operations.





## QUESTIONS

- Q: Are oxygen masks ever necessary when flying in the Constellation? —Ed G., Maplewood, N. J.
- A: No. Constellation passengers never go above 8,000 feet even if the plane's altitude is as high as 20,000 feet. Automatic device controls density, heat, purity and circulation of air in passenger compartments.
- Q: Why does it take so long to develop a new transport? —John F., Baton Rouge, La.
- A: In addition to hundreds of thousands of man hours of basic engineering, literally thousands of men are made to sit around tables before an airplane is built. On the Constellation, a complete hydraulic system, duplicating the entire functional mechanism of the airplane, was constructed and used for months to assure perfection of all parts.
- Q: Is there a reason for the stubby profile of the Constellation fuselage? —Tom F., Los Angeles, Calif.
- A: Yes. Its aerodynamic design allows maximum length for full-sized pressurized cabin. Down-sloping nose undergirds better pilot visibility—reduces landing gear weight.
- Q: You say the Constellation is a safe airplane. Why? —B. L., Springfield, Mass.
- A: In the first place, four powerful engines mean greater safety. The Constellation will CLIMB on any two of them, land in side of fully loaded with a very short run, and it will fly over bad weather. In addition, its six great power levers are sure of other safety features. A few of them are: retractable landing gear, automatic prop governors and power brakes on operating controls.

Send in your questions . . . Address: Lockheed Aircraft Corporation, Department 60-55, Burbank, California



FOR NEW WORLD STANDARDS IN AIR TRANSPORTATION  
LOOK TO **Lockheed** FOR LEADERSHIP

Lockheed Aircraft Corporation, Burbank, California

## PRIVATE FLYING

### New Prototype of Globe Swift May be Flight-Tested Next Month

Experiments continuing on earlier two-place craft, while a third—a four-place "family plane"—is reported in mockup.

By ALEXANDER MCMURELY

A new revised prototype of the Globe Swift, two-place low-wing contender in the personal plane market, which probably will sell for around \$2,000, is expected to be flying by mid-January, officials of Globe Aircraft Corp., Fort Worth, disclose.

Meanwhile flight tests are continuing on an earlier two-place model, while yet a third model, a four-place "family plane" is reported in mockup stage, but Globe officials would not comment on this last plane.

**Design Changes**—Main differences between the revised and the earlier prototypes are in construction, the later Swift having an all metal fuselage and plywood wing as opposed to a fuselage partly of metal skin and partly of fabric-covered steel tubing, and plywood wing, on the earlier plane. The new model also will be slightly longer, providing more cockpit room and will have a sealed upper closure to the wingtip canopy.

The Swift has a 34-foot wingspan, 20 feet 4 inch length and 6 foot 3 inch height. A wide landing gear track, 7 feet 6 inches, gives added accuracy in landing. The landing gear is conventional with main wheels fully retractable and operated by a hydraulic system. Wings have split-type flaps, making possible landings at 42 mph. Wings also are twisted, and set at 4 degree dihedral, while horizontal stabilizer is set at 8 degree dihedral. Flaps are operated manually with a lever like an automobile handbrake. Toe brakes on the rudder pedals are similar to those used on Army planes.

**Speeds**—The Swift will cruise at 150 mph, with a top speed of 185 mph. Standard engine is an 85 hp. Continental, although the plane also will be offered with an alternate 100 hp. Lycoming engine. Prototype is equipped with a Robey controllable propeller, but a fixed pitch propeller will be standard equipment on the pro-

duction plane. Standard equipment also will include battery, starter, generator, fuel pump and standard instrumentation. De luxe extra cost equipment will include the controllable propeller, a manifold pressure gauge, and radio and additional instrument equipment.

Gross weight is 1,540 pounds, weight empty, 1,000 pounds, wing-loading 12.97 pounds per square foot, and power loading (for the 85 hp. engine) is 18.45 pounds per horsepower. The plane has a total wing area, including flaps and ailerons, of 130 square feet.

**Range**—Cruising range is 600



Swift Instrument Panel: Instrument panel and interior of Globe Swift prototype's cockpit are shown above. Equipment includes two-way radio, manifold pressure gauge, used when plane uses Robey controllable propeller. Plentiful sides of cockpit enclosure can be lowered or raised to make open or closed cockpit.



New Photos of Globe "Swift" Prototype: Excellent characteristics of Globe Aircraft's new entry into the personal plane market, the Swift, are seen in above photo, showing the Swift landing with flaps extended. Slatted wings, retractable landing gear, Robey controllable propeller, slatted canopy are visible. Below: Platform photo of Swift gives another slant on plane's trim lines.



miles, with 26 gallons of fuel capacity and a gasoline consumption of five gallons plus, per hour. Current Swift prototypes are descendants of the first Globe Swift, which received its first CAA type certification in 1942, but never went into production because of war-time material restrictions.

Instead, John Kennedy, president and general manager, and his engineers and production men went into war production themselves, turned out 600 of Beech-designed A-10 twin-engine training planes, and currently are making sub-assemblies for other military contractors.

## Bendix Copter Data

Bendix Helicopter, Inc., has issued new information on what is termed the company's first post-war production model, a 200 hp, four-passenger helicopter. It will have a cruising speed of 120 mph, and a rate of climb of 600 feet

per minute, the announcement said. Other details were reported in AVIATION NEWS (July 21).

## Greater Plane Use Through Rental Seen

R. S. Robie, veteran Cambridge, Mass., "Drive Yourself" auto dealer, predicts wide expansion of "U-ly-it" business in Aviation Clinic talk.

Greater utilization of planes through plane rental, making possible economically sound rental charges to "occasional" pilots will be one of the biggest assets of the potential "U-ly-it" business R. S. Robie, Cambridge, Mass., veteran auto rental operator, predicted at the National Aviation Clinic at Oklahoma City.

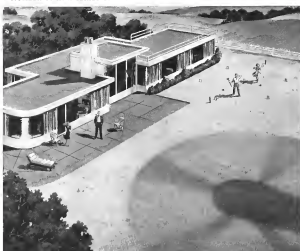
Using the estimate previously supplied by William R. Kent, Southern Air Services, Memphis, that by 1950 there will be a million pilots and 200,000 private air-

craft, Robie pointed out that this was a ratio of 24 pilots to a plane, "an excellent ratio" for plane rentals.

**Drawbacks**—Taking up arguments offered against plane rental service, Robie admitted that plans, engines and other damage to rental planes would be greater because of lack of responsibility of pilots, and that insurance rates would be higher "until the development of a good experience," but pointed out that these factors obtained equally in the auto rental business.

A plan of national operation with individual operators working in a reciprocal organization would take care of returning planes to base stations, and would set maintenance standards for all operators, and would also provide for uniform checking out of pilot customers, and providing them with credentials good at any member operator's base.

**Plane Renting**—Robie predicts that plane-renting will follow pri-



## "SIGN IN THE SKY..."

See that shadow! It is symbolic of a new and different type of aircraft. Rapid progress has been made in helicopter development during the war, under Government sponsorship... and the modern helicopter can be expected to play a practical and useful part in the great future of air transportation.

The special flying abilities of the helicopter qualify it for many time-saving, peacetime applications... superseding conventional air transport... serving and saving in ways beyond present limitations.

So look ahead and look aloft. While still present

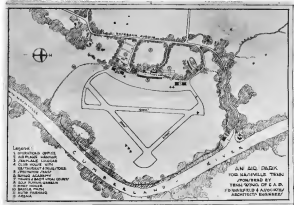
Kellett facilities are concentrated on military production, the Kellett engineering staff and productive organization are working toward the day when "flying without wings" will take its useful place in tomorrow's skies.

### SEND FOR INTERESTING BOOKLET

There may be some questions in your mind about the helicopter... its capabilities, possibilities, and its probable post-war services. If so, send for an interesting booklet, "Answering Some Helicopter Questions." Write Kellett Aircraft Corporation, Dept. N, Upper Mersey (Philadelphia), Pa.

# KELLETT

OLDEST ROTARY WING AIRCRAFT MANUFACTURING COMPANY



## NASHVILLE CAP AIRPARK:

Total expenses of less than \$150,000 are estimated for the proposed Nashville, Tenn., airpark, located in a bend of the Cumberland River with facilities for floatplanes as well as landplanes. Sponsored by the Tennessee CAP Wing, and the State Bureau of

Aeronautics, the proposed airpark would include and maintain, openhouse office, hangar, clubhouse with restaurant and drugstore, spectators' seats, riding academy with bridle paths circling the field, tennis courts, golf putting greens, and parking space.

COOLING AIRCRAFT ENGINES WITH ONLY 1 POUND  
OF ALUMINUM TO EACH 3 POUNDS OF COPPER



Feather-Weight all-aluminum oil coolers and coolant radiators... made of Hydron extruded tubing... tested by CIBRD's patented method... represent "one of the greatest contributions in recent years to aviation as weight of equipment does for aircraft." So reports the Society of Aeronautical Weight Engineers in presenting Seal of Approval Certificate No. 44-14.

Battle-tested in two types of USAAF fighters, saving approximately 120 pounds in one and potentially more than 300 pounds in the other, Clifford Feather-Weights are now being developed in elliptical and oblong shapes for new warplane models.

How about Feather-Weights for post-war planes? Although our production is 100% in war work, our engineering department occasionally finds time to do a little looking ahead. Already we're in correspondence with several aircraft manufacturers who have an eye for the future... who can visualize the increased payload, speed, range, obtainable by replacing heat-deteriorating, heavy-weight copper with heat-treatable Feather-Weight Aluminum in oil coolers and coolant radiators. Maybe we can do some planning with you? Let's talk it over.

CLIFFORD MANUFACTURING CO.  
802 S. First St., Boston 27, Mass.

**CLIFFORD**  
*Feather-Weight*  
**OIL COOLERS  
COOLANT RADIATORS**  
Save  $\frac{2}{3}$  the Weight  
... same size and shape  
... INDUSTRY'S FIRST HYDRAULICALLY-FORMED BELLOWES



vote six cargo lines, just as truck leasing has followed the trucking business, with "Fly-yourself" companies providing the planes and complete service except for the driver, enabling several companies to have use of the same cargo plane, again providing greater utilization and consequent economy. He also foresees that business firms will utilize U-fly-it planes to supplement their own planes, and when their planes are grounded for repairs.

A questionnaire sent out to nine rental operators indicates that more than 50 percent of the operators are anxious to participate in U-fly-it service. It also shows the percentage would be even greater now, and concludes with the opinion that the automobile rental business is far from reaching its peak, and that automobile renters are expecting "to take to the air" when America takes to the air.

## Indiana Aircraft Trades Unit Revived

Group, inactive since 1941, vows to reactivate organization and apply for NATA membership.

Fixed base operators and other members of the old Indiana Aircraft Trades Association, inactive since 1941, have voted to reactivate the organization and apply for NATA membership.

Members likewise made the following recommendations to the Governor's Aviation Committee.

- 1. Creation of a seven-member, non-paid state aeronautics commission composed of a private flyer, fixed base operator, airline representative, doctor, lawyer, banker and the governor. With the cooperation of the governor, it will be required to hold private pilot's ratings or higher, as would a paid director.
- 2. Amendment of a one-cent gasoline tax to finance the commission's operation.
- 3. State adoption of all federal regulations so as to avoid duplication.
- 4. Some state control over location, construction and operation of air ports.
- 5. Federal aid to municipal and privately-owned airports alike.
- 6. Encouragement of landing strips adjacent to cities, towns and villages instead of along highways.
- 7. Expedite resurfacing of town strip markings, with no road markings.

## Georgia to Train Civilian Pilots

State vocational education department reveals plans to use Southern Field as America's, former Army primary base.

The Georgia State Vocational Education Department plans to offer pilot training to civilians, using Southern Field at Americus, recently vacated as an Army primary base, as the initial center, according to M. D. Collins, state school superintendent, who said the United States Vocational Education Service probably would be empowered to provide funds for such activity after the war.

Although the Georgia Department of Education has no funds for such a training program, it is believed they could be appropriated by the legislature.

Plans to be discussed—it is likely that the Vocational Department's plan will undergo considerable discussion. The state Aeronautics Advisory Board, through Chairman Cody Laird, suggested that the state should give serious consideration to the management and operation problems involved.

Laird pointed out that the Army training at Southern had been done on a "disposable" contractor (Griffin Aviation) and that the Army had found in conducting all its primary training through civilian contractors that this method was "much more successful and economical."

## \$5,500,000 Port Plan For Atlanta Asked

A program for a \$5,500,000 development of the Atlanta municipal airport (Candler Field), is proposed by L. W. Robert, Atlanta architect and construction engineer.

An all-weather instrument runway, a new administration building with observation ramps, a freight and cargo terminal building with radial loading and unloading mat to accommodate 11 aircraft are proposed. Dual runways are also planned.

**Ready for Expansion**—Airport Manager Jack Gray said the plan would put the airport in a position to meet "heavy conceivable demands of post-war expansion."

At the same time, the Fulton County Board of Commissioners

decided to start legal proceedings to obtain a 500-acre tract 20 miles south of Atlanta for construction of a super-airport, capable of handling "converted B-29's."

## U. S. May Expand Vets' Flight Training

Renewing service men already are supplying a new source of pilot trainees in some schools.

Returned veterans of World War II are already providing a new source of pilot trainees in small numbers at some flight training schools, and a study indicates that provisions of the "GI Bill of Rights," Law 390, and the Disabled Veterans' Rehabilitation Law, may make government-financed flight training available to a much larger number.

A few aviation schools already have been placed on the approved list by state departments of education and the Veterans' Administration, as eligible institutions for training of returned veterans. Other schools interested in becoming eligible for this training may obtain information about qualifying from the national manager of one of the 53 Veterans' Administration field offices.

**\$500,000 Candidates**—Estimates are that the main group of veterans expecting to seek post-war education at government expense will be 1.5 million men under 25 years old at the time of induction, of whom approximately 37 percent are high school graduates or have earned some college credits before entering the army. Indications are that approximately 300,000 will be candidates for full-time educational courses after the war.

With certain limitations, each returned soldier with "either then a dishonorable discharge" may take a year of educational training, paid for by the government up to a maximum of \$500, for tuition, books, and other school expenses. The expenditure must cover a school year of 30 weeks or more, of full-time work if he receives the full \$500. If his course is less than 30 weeks, the maximum is proportionately reduced. In addition he is entitled to subsistence of \$50 per month if single or \$52 per month with dependents.

**Time Limits**—If he completes the basic year satisfactorily, he is permitted to continue his education on the same basis up to three years additional, the years

of training not to exceed the years he served in the armed forces. While the law provides that veterans over 30 at the time of induction must show that their education was interrupted or interrupted with, in order to receive more than one year of training, it assumes that veterans under that age have suffered.

Disabled veterans seeking vocational rehabilitation may participate under Law 366, if they choose, or under Law 16, which also provides training facilities. It is assumed that most pilot trainees would not come from this group, although with relaxation of CAA regulations concerning physical disabilities, it is probable that some would be eligible, at least for private licenses. However, unless their air knowledge was to be of use to them in their vocations, it is not likely that the government would finance a private pilot's course which stopped there, and did not continue on through commercial or instructor grade.

**Financing**—At present rates, it is extremely doubtful whether the maximum of \$450 a year permitted would be sufficient to finance most full-time aviation courses for a returned veteran, unless a school provided quarters for him, and received part of his subsistence allowance as well. However, it is quite probable that on a part-time basis he could take aviation training at a cost which could be met by government allowances. It is conceivable that a flight school able to serve a considerable number of returned veterans on students might arrange a special ser-

vicer's rate. And it is understood that some of the colleges and universities operating flight training courses in connection with their aeronautics departments, have been able to provide some flight training along with their academic courses, to returned veterans under the Law 348 plan.

## Piper Asks WPB OK On Civilian Aircraft

Approval expected on request for permission to build civilian aircraft in view of outcrop of surplus in use.

Piper Aircraft Corp. has requested permission to build civilian aircraft on a large scale starting in January.

The Piper application was sent to the War Production Board last week and has not yet been processed. After preliminary screening at WPB, it will be sent to the War Manpower Commission for approval before final okay by WPB.

The CMAPB form used in applying for civilian aircraft production specifies that Piper will not need additional manpower to produce 31 Piper Cub J-3's in January and 100 a month in succeeding months. Since the Piper Lock Haven plant is not in a critical manpower area it is considered probable that WMC approval will be given.

**Green Light for Grumman**—Grumman has been given the go-ahead signal on the construction of 25 planes for military civilian use, the first WPB authorization of its kind. The application of Engineer-

ing and Research Corp., of Riverdale, Md., has been turned down by WPB and is now before the Production Resources Committee on appeal. The application of the Ercoupe nation was rejected, WPB sources say, because labor is needed in the Glenn L. Martin plant in Baltimore and the Ercoupe activity is in the same general area. The company has essential-coded orders for almost 100 planes.

The applications and permission to build, mark a new phase in the provision of airplanes for essential civilian users. Heretofore, some war contractors have been able to secure allocation of planes from service production through the Manpower Assignment Board (Air) and the Joint Allocation Committee, with the services retaining the power to determine essentiality and priority in acquisition of planes.

**Other Users to Get Planes**—Now the WPB priorities rating branch and the new Aircraft Division is permitting other essential users to obtain planes for civilian production. The WPB is not restricting the aircraft industry to civilian production through operation of the L-48 order that is applicable, but attempting to provide planes for users who have a real need of aircraft but do not wholly fulfill the requirements of the services.

The priorities rating branch has been attempting since last summer to obtain a patchwork of essentiality order which it could measure applications for planes (which must be submitted on Form 1213). This had not been obtained when the Aircraft Production Board went out of existence, and generally speaking the rating branch has been following its own recommendations in measuring essentiality of applications submitted in CMAPB requests for permission to produce for civilian users.

Formulating of this process will be one of the major tasks of the new Aircraft Division of WPB, which Henry Nelson, formerly of the National Aircraft War Production Council, is expected to head. Morton Weiner, placed on inactive duty status by the Army at the request of WPB Chairman J. A. Krag to act as deputy director of the Division, has begun the work of organization. He has been serving as a major and attached to the Aircraft Scheduling Unit at Wright Field, Nelson, it is understood, has not yet finally accepted the directorship of the Division, but is under considerable pressure to take over the duties.

# Private Pilots: FLY SOUTHEASTERN



## Our ASSOCIATE BASES are opening ALL OVER DIXIE

- Our job today is to look toward new horizons... and to knit together a great pattern of small business in the service of aviation. In so doing we render a greatly needed service to private flymen, to counties and municipalities, to aircraft manufacturers and, in fact, to all who are a part of the aviation industry.
- The organization of Southeastern's Associate Bases is the dominant factor in the execution of our plan, which is simple. Each Associate Base operates as an individual proprietorship or company and provides a local management and local community cooperation. We assist by supplying airplanes, sales financing, insurance and main-

purchasing contact. We also supply our maintenance and service facilities at special rates.

- Individuals who are interested in these franchises throughout Dixie should write to us immediately. We also invite inquiry from manufacturers and others interested in sales or service.
- Because we have spent many months in the preparation of this plan of Associate Bases, because we are experienced in flight operations and because our Associates are controlled by a strict policy of competence in their operations, we believe that we can say with confidence to the private pilot: "FLY SOUTHEASTERN!"

Instruction Overhaul and Repair Instrument Ratings  
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**SOUTHEASTERN**  
**PIR SERVICE, INC.**  
Executive Offices and Operating Base  
ATLANTA, GEORGIA

ASSOCIATE BASES  
ALL OVER DIXIE



OVERHAUL & REPAIR BASE  
ATHENS, GA.

OPERATING BASE  
MACON, GA.



## MISSOURI'S MODEL AIRPARK AT ELDON

Model airport for the state of Missouri is being developed at Eldon, Mo., (population 2,500) as shown in architect's plan above. Planned by the community, on a site at the northeast edge of town and within walking distance of any place in the community, the project is favored by Missouri state aviation officials, at demonstration of what a small town can do in the Air Age. Surveys are being. Some of the hangars may be erected for demonstration purposes by manufacturers.

## PERSONNEL

**Charles W. Ferrell**, vice-president in charge of manufacturing of Hughes Tool Co., of Houston, and general manager of the Hughes Air-



craft Plant in Los Angeles, has been elected to the board of directors of Transcontinental and Western Air, Inc.

**Dr. George W. Lewis**, director of Aeronautical Research at the National Advisory Committee for Aeronautics, was awarded the "Squire of St. Louis Medal" for meritorious service in the advancement of aeronautics by the American Society of Mechanical Engineers. Other recipients of this medal in the last fifteen years have been: Donald Guggenheim, Paul W. Litchfield, Will Rogers, James H. Doolittle and John E. Younger.

**Donald B. Cooper** has been named staff assistant in the readjustment service of the Aeronautical Chamber of Commerce. Before joining the Chamber, Cooper had recently completed a special assignment for Air Corps, Inc. Prior to that he was principal liaison officer with the Office of Land-Lane Administration, charged with coordinating the Land-Lane program with the procurement divisions of the U. S. Treasury.

**Glean Gilroy** is Western Air Lines' newly appointed traffic representative in Hollywood. He has been in the transportation industry for nine years with air line and railroad companies.

**R. W. Davis** has been named general manager of the Allen-Chalmers Manufacturing Co.'s Norwood, Ohio, works. Prior to his appointment, Davis was assistant manager of the

company's electrical department at Milwaukee.

**E. J. Englebert**, director of service engineering of Micron Products Co., Inc., Englewood, Calif., is now on leave of absence assisting Bell Aircraft Corp., Muskegon, Ga., with their B-28 program. During Englebert's absence he will be replaced by **George Mahed**.

**Erwin A. Kallenberger**, manufacturing manager of the Caldwell-Clifton plant of Curtiss-Wright Corp., has completed twenty years' service with the company. When he joined the propeller department of the old Curtiss Aeroplane and Motor Co., in 1924, propellers were undergoing the transition from wood to metal.

**Warden Green** has been appointed superintendent of the Newark, Ohio, plant of Goudreau Aircraft Corp. He was formerly general foreman and manager of plant engineering at Newark.

**Robert A. Gaffney** has been appointed assistant director of labor relations for Bell Aircraft Corp.,



and will participate in labor relations throughout the corporation. Until recently on active duty as a lieutenant colonel in the AAF, he was labor relations representative for the eastern procurement district, prior to an overseas assignment. Gaffney also served as commissioner of aviation in the Department of Labor.

**Robert H. Cole**, Minnesota Chemical Co., St. Louis, vice-president and general manager of the phosphate division, has been elected a member of the board of directors to replace **John C. Brooks**, deceased.

**Jack B. Hughes** is eastern division sales manager for Littlefair, Inc., and the company has opened a New York office.

**Harbert Hartung**, senior aeronautical engineer at United Air Lines' central maintenance base at Chgoe, has been appointed assistant superintendent of maintenance at the company's Chicago headquarters. Hartung will be responsible for the maintenance of aircraft radio and electric systems, a function previously

only handled by the communications department.

AAF resident representative for the Buffalo and Kenmore plants of Curtiss - Wright Corp., Aviation division, has been promoted to a full colonel.

**Col. Thomas A. Murphy**, a graduate, executive in aviation before the war, was chief engineer in the War Department for Huff Daland Co., then designing the first Keystone bomber for the Army, chief engineer at Sperry Aircraft Corp., and Consolidated Aircraft Corp. He was assistant in the production at Chance-Vought Division of United Aircraft Corp. and became assistant to the president and general manager of Sikorsky Aircraft Corp.



**Dean Swilt**, formerly of Seattle, announces the opening of offices in New York City, where he will represent the Western Gear Works' plants at Seattle, Wash., and at Edinboro and Vernon, Calif., and Western Gear's complete plant, the Pacific Gear & Tool Works of Ben Francisco.

**Harry W. Hahn**, recently plant manager of Dux Cast Corp.-Warner Manufacturing Co., in Glendale, Calif., has been appointed vice-president in charge of engineering and production for the H. L. Her-vill Manufacturing Co., Vernon, Calif.

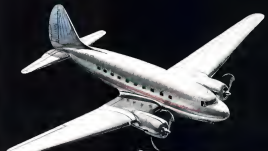
**Walter E. Jones** has resigned as Chief of the Operations Branch of the Lumber & Lumber Products Division of the War Production Board to resume his former duties as vice-president of The Mergel Company. Jones is also president of U. S.-Mergel Plywoods, Inc.

**Blanca Palacios** has been appointed by the National Aeronautic Association to take charge of its new activities as the United States Wing of the Inter-American Aeronautic Association, headquartered in Mexico City, Mexico.



Ca, Mexicana de Avian and the western division of Pan American Airways, before she came to Washington to join the division of labor and social information of the Pan American Union.

**Col. Bryant L. Hudson** has been named acting chief of the procurement division in the Air Technical







## WAR PROVED IT WORTHY FOR SKIES OF PEACE

Designed as a peacetime transport, the original introduction of the Curtiss Commando was interrupted by war. It became a military aircraft to fly millions of miles under the severest conditions. It was constantly improved in serviceability and dependability in what constituted a prolonged and far-reaching stake-down test. \*\*\* Today, Curtiss introduces the peacetime version of this tested and proven passenger-cargo airplane. Richly appointed for passenger appeal, the Commando, with its powerful 18 cylinder Wright Cyclone Engines and Curtiss Electric Propellers, is the world's largest twin-engine transport. It meets a definite demand for larger payload, greater reliability and reduced operating costs—its performance being particularly outstanding on hops up to 700 miles—a range that accounts for over 90% of all domestic air travel. \*\*\* "Look to the Sky, America!" Curtiss-Vought Corporation, Airplane Division, Buffalo, New York.

**Curtiss Commando**  
★ Low Bidder for Tomorrow's Air Commerce



COMMANDO TRAVELERS RIDE IN COMFORT

A POWDER ROOM IN THE SKIES

Commando passengers ride in such comfort. Toilet facilities of the Curtiss Commando easily adjustable swinging chairs. Cabin provides convenient and efficient air-conditioning temperature is kept at 58° with a complete air-purifier system. In addition to the other things of an earth cabin. Illumination in modern mode's even there is a search light by indirect fluorescent lighting from the overhead room. Its appointments include all riding plus individual reading lights, the necessary menus, plus bar-bar table with the glass service (Commando is a 20 inch maximum make-up mirror, full length mirror etc. without any more to other passengers) and soft lighting.



MODEL VENTURE AND STEWARD'S CORNER

Opposite the entrance vestibule which protects passengers against blow drafts, is the stewardess' desk. From it she controls cabin illumination, ventilation and heat. A phone connects her with the pilot and engine compartment. In addition, her desk is equipped with all essential emergency equipment as well as strong accessories for passenger comfort.



MECHANIZED SKY KITCHENETTE

A complete sky kitchenette with pantry, the Commando's polished metal galley is a model of compactness and capacity. Equipment, including electric range, grill hot plates, toaster, mixer, bottle warmer, makes possible for the first time a wide variety of menu plans—a welcome contribution to the improvement of travel by air.



## THE COMMANDO IS A PILOT'S AIRPLANE

For the pilot, the Commando offers important operational advantages including wide-angle clear vision regardless of weather conditions—excellent maneuverability and inherent adaptability about all three axes—simplification and convenience of instrument panel controls.

Principal power plant, landing gear, flap and other important controls are grouped on a pedestal equally accessible to pilot and copilot. Night and instrument flight are made easier by reflection-free cockpit illumination.

Nothing has been spared to provide the finest flight control and ground communication systems in piston-aircraft.



320 CURTIS HET OF CARGO SPACE FORWARD

Aware of the economic importance in operation of speed and ease in loading and unloading baggage, mail and express, the Commando's cargo compartments are roomy, clean, convenient and accessible through doors large enough to accept a full-size wheeled trunk.

Both cargo compartments are located far back in the cabin floor in the belly of the airplane. When the airplane is in normal position, the floor is 8" to 10" above the ground. In both compartments are secure, padded cradles, sliding equipment, and unloading cranes.

Bernice Comstock with headquarters at Wright Field, Ohio. Colonel Warner will serve as chief of staff. Gen. Gerald B. Cook, chief of the procurement division, who is on a special mission.

Edwin F. Stahl has been promoted to the position of executive vice president of the J. P. Morgan & Co. Bank.

Stahl has been named general manager of the new World company since its establishment and prior to that was director of the technical division of the Emory-Biddle School of Aviation, Miami. Stahl is presently in San Francisco, Calif., reviewing contract needs of Republic Texaco de Aviacion.

Several personnel changes have been made by Northwest Airlines. Richard D. Lavoie, formerly station manager at Boston, has been promoted from supervisor of stations to superintendent of stations. Charles E. Bond has been promoted from station manager at Denver to supervisor of stations, succeeding Lavoie. Albert C. Crowder has been transferred from station manager at Portland to station manager at Bangor. Albert E. Wyman has been transferred from Boston to Portland and Jarvis A. Stokess has been promoted to station manager at Portland from the Logan International Airport.

James V. Carmichael has been named manager of the Bell Aircraft Corp.'s Muskegon, Mich., plant producing B-28 bombers. Carmichael, who has been assistant manager, succeeds Carl A. Casse, killed recently in a plane crash at Wright Field, Dayton. At the same time it was announced that Ernest J. Englebert will be placed in charge of production of B-28s. Before joining Bell at Muskegon, Englebert was assistant manager of Douglas Aircraft Co., Inc.'s El Segundo plant. At that plant he was closely associated with Cessna, who was an executive of the company prior to coming with Bell time in August.

Caesar Viana, former pilot for All American Aviation, Inc., and a foreign representative of Consolidated Vultee Aircraft Corp., has been named operations manager for TAGA Airways in Venezuela.

M. J. Merrill has been named head of the Inspection Department of the Tucson Division of Consolidated Vultee Aircraft Corp., replacing W. C. Mitchell as chief inspector. Merrill started an aviation 18 years ago with Hamilton Aircraft Corp., St. Louis, and has been a Curtiss inspector since 1936.

John Edward Schroeder, formerly current operations analyst for the surplus division of Curtiss-Wright Corp., at Buffalo, has become operations analyst with the New York stock exchange firm of Balaban, Granger and Co. Prior to affiliation with Curtiss-Wright was an analyst of aeronautical securities for a Wall Street firm.

Palmer A. Newell, representative for Consolidated Vultee Aircraft Corp., at Washington, has been appointed export sales director for the company. Harvey C. Tule, service director in Washington, will replace Newell, while O. E. Mechem, assistant service director, succeeds Tule. Newell joined Vultee Aircraft, Inc., in 1939 as vice-president in charge of sales. A year later he became Washington representative and remained in this capacity after the merger with Consolidated Aircraft Corp. Tule served as division manager of the Nashville plant and service director at San Diego. Formerly he was sales director for Curtiss-Wright.

H. W. Crowther (below) is system superintendent of maintenance for Transcontinental and Western Air, Inc., with headquarters in Kansas City. Crowther succeeds William McKechnie, with whom he served as assistant superintendent of maintenance until McKechnie's resignation in the fall to join Martins Air Line. He has been with TWA since 1926.

Dr. Albert E. Luskard, Jr., has been named engineering consultant specializing in product development for Consolidated Vultee Aircraft Corp. Dr. Luskard's resignation from the Royal Canadian Air Force, succeeding G. M. Brown. McKechnie has been deputy director for several years and is the only civilian in the RCAF public relations directorate.

Laurel McKechnie has been appointed director of public relations for the Royal Canadian Air Force, succeeding G. M. Brown. McKechnie has been deputy director for several years and is the only civilian in the RCAF public relations directorate.

William McCray Simpson, formerly stress analyst for the Santa Monica plant of Douglas Aircraft Co., Inc., has become professor of aeronautics and director of that department at the University of Kansas. Simpson was previously an instructor at the University of Missouri before coming to Douglas.

Donald Still, San Francisco regional manager of the department of pub-

lic relations of General Motors Corp., was appointed chairman of a new public relations subcommittee of the Bay Area Aviation Committee. Serving with Still is W. H. Williams, manager of the publicity department of the San Francisco chamber of commerce.

James C. Welch has been appointed private sales director for the Eastern Division of Consolidated Vultee Aircraft Corp. A veteran of 30 years in aviation, Welch joined Boeing in 1932 as engine inlet manager. He was a pilot engineer for two years with the Eighth Air Force and the RAF. Welch was sales manager for the first company to install light planes in the U. S. Air Force organized the first combination flying and ground school in Cincinnati, he became business and sales manager for an aviation corporation at that city's Lunken Airport.

Fred F. Miller, customer service manager of Aulic Precision Products Corp., Burbank, Calif., has been appointed a United States Naval Technician. His appointment was made at the request of the Bureau of Aeronautics and he will serve as a hydraulic specialist with the Pacific Fleet Air Command.

Lt. Col. James H. Bechtel, commanding general of the Eighth Air Force, was awarded a Oak Leaf Cluster to the Distinguished Service Medal for meritorious service as commander of the Eighth.

Charles A. Wright, vice-president of Bankers Trust Co., has been elected a director of General Motors Aircraft Corp. He is succeeded by Albin Gilles, who has resigned as a vice-president and director.

Capt. Charles J. Moore, Navy officer in charge, Post War Naval Planning Section, Office of Naval Operations, has received the Legion of Merit from Assistant Secretary of the Navy for Air Armand L. Galen.

Brig. Gen. W. E. McKechnie has assumed the duties of Air Quartermaster in the Army Air Force. He has been director of military training, Quartermaster Corps, at Air Quartermaster, General McKechnie will direct AAF Quartermaster functions and supervise technical operations.

George Hanson, manager of the Kansas City District of industrial products sales division of B. F. Goodrich Co., has completed 40 years of service.

# Curtiss Commando

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## THE AIR WAR

### COMMENTARY

## New Navigation Aids Presage All-Weather Strategic Air Force

U. S. and British release additional data on precision instruments and techniques developed in last three years; round-the-clock bombing of Jap industries forecast.

Another rift in the murky radar blackout broke through last week with brief accounts in the American and British press and radio of the new weather bombing equipment and techniques which have been developed during the past two or three years by the Royal Air Force Bomber Command and the U. S. Army Air Force.

It may be assumed that the Navy has been active in similar developments. Its importance is evident in the strategic bombing of military and industrial objectives in Europe, by RAF at night and by theAAF through the past 14 months of unobscured continental weather. However the prospects for round-the-clock air attacks against Tokyo's factories and the rest of the concentrated Japanese armies of land attack (from the imagination The night attacks of the B-24s were said to have been very rarely as successful as the daylight smashes from the strategic bombers, with the additional advantages of decreased fuel and fighter opposition, return to base in daylight, etc.)

**British Developments**—About one year ago (from the first issue) a 2,000-lb. right assembly on Berlin, the British Air Ministry announced some details about the development of the work of the "pathfinders," whose techniques had been passed on to the training and experienced over a period of two years. The first pathfinder units were actually put into operation in August, 1943, the new month during which the first modern but highly significant daylight missions the U. S. Eighth Air Force Bomber Command were sent over occupied France.

The methods were developed during RAF Bomber Command's attacks on Berlin which extended roughly between March and September 1944. During the develop-

ment night attacks on Berlin it was announced that the big Lancaster and Blenheim bombers dropped their loads right into the industrial sections of the city. This was achieved by "very precise instrument navigation of the pathfinders" who, once they had found their target, dropped colored indicator flares which were visible through almost 100 miles of clouds, thus making ground fog no longer the obstacle it used to be. At that time public attention was directed to the "flares" which were dropped by the "pathfinder" aircraft, and now, a year later, a curious amount of information has become available on the "precision instrument navigation" whereby the pathfinder was able to get to its appointed spot with the necessary accuracy. **Red Weather Bombing**—From the published description of its operation, the basic instrument is obviously a radio search set and ranging unit, combined with a direction indicator. As the instrument pilot has been appropriately nicknamed "George" (when the pilot gets a hit find he can "let George do it"), the American version of the overcast bombing equipment has been called "Mickey."

According to the well-known principle discovered at least a quarter of a century ago when the term RADAR (radio detection and ranging) was coined, Mickey transmits radio waves which strike surface objects and rebound to a receiver in the pathfinder bomber, giving an outline of cities, coastlines, ships, and even groups of buildings, railroad yards, etc. These outlines are thrown on a circular map-type screen or "scope" and require expert interpretation. It is of course not enough that for picking up a particular building in a factory Mickey is a match for the Norden

bombight used in clear daylight, but some of the results have been most remarkable.

**Operational Use by AAF**—The first announced "bad weather" attack by the Eighth Air Force was on Sept. 27, 1943, when some 360 B-17s, escorted by P-43s to the target and back, carried out a successful mission on a 690-mile round trip to Rendsburg, using British type pathfinder equipment. Larger missions against Wilhelmshaven in November, and against Bremen and Kiel in December, with American equipment, were especially noteworthy. Bad weather prevailed during November and December, yet the Eighth carried out more missions in November than it ever had before, and in December broke all its previous records in total bombs dropped—94,000 tons. Early in January, Maj. Gen. Fred Anderson, former chief of the 8th Bomber Command and newly appointed operational deputy for General Spaatz' U. S. Strategic Air Forces in Europe, revealed at a press conference in Washington that most of the missions in November and December had been carried out by means of a "new technique" permitting the daylight bombers to strike through cloud cover.

Recent accounts indicate that the use of this equipment has spread to the Fifteenth Air Force in Italy, and that it is not confined to night operations in bad weather, but that regular night bombing missions are now carried out. Press dispatches concerning the first night attacks of the Superfortresses from Europe stated that "precision instruments enabled the bombers to hit war industries despite obscuring clouds" are full of significance and spell the worst possible news for Tokyo.

NAVYMAN

## Hardin Commanding Pacific ATC Wing

Brig. Gen. Thomas Hardin has been assigned commanding general of the Pacific wing of the Air Transport Command with headquarters at Hamilton Field, San Francisco. General Hardin has been commanding general of the India-China division of ATC and was in charge when transport crossing the hump reached its peak. He will have as executive officer Col. Richard Felt who was with him in the China-Burma-India theater.



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## Beech First Plane Firm to Shift Into Non-Aviation Production

Company's entrance into home construction field may set pattern for other aircraft plants searching for substitute item to turn out for post-war markets.

The entrance of Beech Aircraft Corp. into the home construction field represents the first tangible effort made by an aircraft builder to utilize its resources in the manufacture of a non-aviation product.

One of the chief reasons why the aircraft industry has been regarded as having poor post-war prospects has been the limited markets it is believed to have for peace-time airplane sales in relation to the huge production facilities available and keyed to war-infused needs. Even the most pessimistic concede that the demand for aircraft in the years to follow the end of the war will be far greater than the levels obtaining prior to 1939. Nevertheless, several companies may not be gunfully occupied if devoted solely to airplane production.

**Techniques**—A way out is believed to be in the application of airplane production technique to other manufacturers. A wide variety of household items along with sundry complex machines including automobiles have, at one time or another, been under consideration by the aircraft builders. The big stumbling block has been the lack of a strong dealer or selling organization.

The Beech venture is a joint affair with Dynastone Dwellings-Michies, Inc., who presumably will "market" the houses along with supervising the building of the initial units.

**Precedent**—There is ample precedent where successful transition from one industry to another has been made. The automobile group, at the onset of its history enjoyed a boom very similar to that of the present day aircraft companies. There were innumerable units all fastened by a new and growing industry. As the initial market demands became saturated and competition increased, a decided contraction took place in the in-

dustry. There were mergers, companies liquidated and other units turning in other directions. The aircraft group may one day follow the same pattern.

Who today would guess that a leading beer and ale is being produced by one of the nation's auto pioneers. The old Packard Motor Car Corp. manufactured automobiles from 1880 to 1931. It was very successful but in the late years of the period ran into string of deficits. It decided upon a bold course of action and converted its facilities into a brewery and became known as the Beeving Corp. of America. The well known Carling Beer and ale now comes from the production lines once devoted to auto manufacture. Strongly enough, the company earned more money in one year than its predecessor ever did during a similar period in the past.

**Nash**—Another case is that of the Nash Motor Car Co. The company came into the thirties saddled with cash and dwindling sales. The founder, Charles Nash, was tired and looking for management skill. The music Nash-Kelvinator Corp., which combined a leading household machinery producer with a motor car builders. The former was short on cash and resources but long on a successful product and management in general. The combination worked, plant facilities and cash were profitably employed and considerable success attended the new combine.

There are many other cases on record where complete transitions, or the less drastic expedient of diversification to other products have been attempted with a high degree of success.

The pessimists who portend dark days for the post-war aircraft builders take a very narrow view and come to but one conclusion: there will be more aircraft building capacity than orders. This may

be true but it overlooks some vital considerations. In the first place, this huge capacity will be largely owned by the government and available for purchase on anti-factory terms. Obviously, plants will not be acquired unless needed or where they can not be gunfully employed. As to the plant facilities now owned directly by the industry, substantial amortization and depreciation charges have reduced carrying values to tolerable levels.

**Cash Position**—It is little recognized, but when war orders cease, it is probable that the aircraft builders will show considerable cash and liquid financial resources. Favorable reserves termination and material disposal policies have been established by the government which makes it unlikely that the aircraft builders will find themselves with frozen inventories and unwanted commodities. Once in possession of liquidity cash positions, the companies can embark upon various courses and will have considerable freedom of action which would otherwise not be possible. They can either disburse special dividends to stockholders or venture forth in new fields.

Generally, any corporate management is loath to declare itself out of business by disbursing liquidating dividends. A partial cash distribution is more palatable with every effort made to function as a going enterprise.

**Positions**—This may well be the pattern to be followed by most aircraft builders. Not all companies may choose to remain in the aviation business. Some may diversify in other directions as an adjunct to aircraft manufacture, as Beech is now doing.

All this represents challenging opportunities to the aircraft builders. The industry has shown remarkable ingenuity in meeting ever difficult production tasks. Starting from scratch, a tremendous expansion was successfully accomplished, much to the surprise of established industrial production experts. New principles of construction and new materials were introduced at every turn. The management ingenuity displayed by the aircraft builders is their best stock in trade. This, with healthy financial conditions, precision-located equipment and modern plants, along with trained personnel, should place the aircraft builders at no disadvantage in invading the untapped markets on other industrial fronts.



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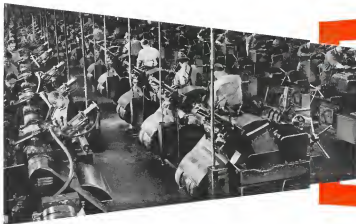
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**PRODUCTION**  
**Constellation's 5-Yr. Development**  
**Described by Lockheed Engineer**

Results of exhaustive design tests will find extensive use in larger post-war aircraft, C. L. Johnson tells Institute of Aeronautical Sciences in Los Angeles meeting.

By SCHOLIER HANGS

Constellation design objectives were detailed for the first time by C. L. Johnson, Lockheed Aircraft Corp.'s chief research engineer, in a paper read before a special meeting in Los Angeles of the Institute of the Aeronautical Sciences, attended by 400 Institute engineers and their guests. Johnson reviewed the five-year development of the airplane and indicated design characteristics that may be expected to be carried into larger post-war transports.

It is his belief that use of hydraulic control, boosters has been proved in the Constellation and that the system will be vital to the success of post-war high altitude turbo jet transports.

**Wind Tunnel Tests**—He said, also, that wind tunnel tests devised for the Constellation had afforded procedures which will find extensive use in testing of future designs.

Particular attention was given to spin recovery tests, made with a compass model in a spin tunnel, and compressibility effects studied with a model in a high-speed tunnel.

Johnson said good results in laboratory study of ground effect in landings and takeoffs were obtained in Lockheed's wind tunnel by transferring to the tunnel device a flat deck directly beneath the balanced model of the Constellation.

"To say that we conducted hundreds of tests of a single feature would be an understatement," Johnson said in describing power plant, frame structure, external design, control, and destination tests conducted at the company's Burbank, Calif., factory and in laboratories throughout the nation.

**Exhaustive Design Retained**—He estimated that laboratory tests were 95 per cent effective in simulating actual flight conditions, and cited as an example the fact that, since the test flight of the proto-

type, not one change has been necessary in the airplane's exterior design beyond modification of the pilothouse windows. An exception in the case of aircraft of other manufacturers, the Constellation's original curved glass windows were replaced with flat windows for better optical results without any increase in cost.

He said six separate nose designs were studied in the approach to the Constellation's present pilothouse design. A dual "bug eye" design for the heads of pilot and co-pilot was abandoned, despite its offering of maximum drag and excellent visibility, in consideration of the susceptibility to electrostatics of some flight personnel as well as the need for a cabin in which pilot and co-pilot might converse easily.

**Power Plants**—The audience was particularly interested in the power plant philosophy applied to

**Main Design Aims**

Lockheed's Constellation was developed with a designed top speed of 465 mph, C. L. Johnson, chief research engineer, revealed for the first time in his Los Angeles address before the Institute of the Aeronautical Sciences.

Quick recovery from a spin was a major design demand predicated on the over-all possibility that even a large airplane might, under unusual storm conditions, be thrown into a spin.

Johnson's strong support for the control power boost for large aircraft will require the test of time to determine its effect on safety.

The extreme opposite of big plane control philosophy is shown in Boeing's Model 271 Strato-Cruiser 100-passenger airplane, which uses conventional controls effectively. Following a test flight, Test Pilot Elliott Sivert said he believed that the big plane responded easily to "nose hand" control.

the Constellation and reasons for the final selection of the larger, heavier 2000 hp engine when 1600 hp engines would have sufficed.

He cited the need for a comparatively complex two-stage supercharger for use of the smaller engine and said the saving in weight of the smaller engine would be counteracted in 2.95 hours of flight at 17,000 feet by increased



**SCRAP ALUMINUM BAILED FOR STORAGE**

Scrap aluminum is beginning to move in heavy quantities from aircraft plants to scrap storage depots provided by the Army and operated by the Metals Reserve Co., RFC subsidiary. It will be held in storage for an indeterminate period. Other quantities will come from scrapped surplus combat planes, and not all will be pressed and baled until manpower and machinery are available. Photo was taken of the Northrup plant, and the scrap will be shipped to the Air Technical Service Command depot at Creech Base, Calif.

# HARRIS

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HARRIS A-N standard shock mounts are made in two types, steel and dual (non-synthetic) and conform to the joint Army-Navy specification AN-1-18 and drawing AN-4008.

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fuel consumption of the smaller engine operating at a higher percentage of power output. The larger engine, operating at a lower percentage of power, offered a fuel consumption of 0.44 lbs./brake horsepower/hour, whereas the smaller power plant indicated a fuel consumption of 0.56 lbs./brake horsepower/hour.

Final selection of straight, frontal installation of engines, and air intake followed numerous tests of experimental designs with intakes in the sides of nacelles and in the wing leading edge, the latter requiring an unsatisfactory double bend of the airflow from intake to exhaust. Prior to the selection of the larger power plant assembly, two full-size units were tested in flight by mounting on a Lockheed Ventura, which company test pilots promptly named the "Ventilation."

► **Hydraulic Control Boost**—Nationally prominent in engineering circles as a proponent of the hydraulic control boost, Johnson requested paralyzing development of the system to its present perfection. A full year's work by a mathematician was required to develop to the point of practical application the company's theory that the power boost could be used successfully to dampen control surface flutter, he said.

In the course of control boost development, Lockheed technicians experimented with force ratios up to 33:1, finally modifying the ratios variously to provide desirable pilot "feel" in applying cockpit pressure to rubber, elevator and aileron controls.

Johnson's address will be printed by Lockheed for clients and interested airline officials.

## New Type Fairlead

Development of a new type of fairlead for airplanes, made of plastic and two small pieces of rubber, which is snapped into panel openings instead of bolted in the conventional manner, is reported by the Cycle-Weld division of Chrysler Corp. It is being manufactured in the Chrysler Calhoun plant.

It is known as Cycle-Weld Snap Lead, weighs only five grams and Leslie Paxton, manager of the operation says the new device can be installed in ten to 30 seconds compared to two to ten minutes for the present 26.5 gram type of fairlead made of bolted phenolic laminated plates.

► **How It Works**—Two thin rubber

strips which serve the dual purpose of holding two companion plastic pieces together, and providing an elastic grip as the lead is snapped into panel slots, are held in place at four opposite points by an exclusive process of current bonding developed by the company.

Several hundred fairleads are used in guiding control cables in most aircraft. Paxton said that in addition to saving in weight and installation costs, the device in tests has withstood more wear than present types.

## De-Icers on P-61's

Deleasure that rubber De-Icers, the pulsating type which break off wing-edge ice as the wings expand and contract, are now being used on first fighter planes was made by James B. Peffer, manager of the Aeronautical Division of B. F. Goodrich Co.

One of the fighters on which the De-Icers are being installed, after exhaustive tests, a Northrop's P-61 Black Widow night fighter. The De-Icer is a new type, reported to be thinner and lighter than earlier models, but with a heavier ice-breaking quality.

► **Tested on B-24**—Peffer said the new type also has been tested on a Consolidated B-24 Liberator which spent more than a year on a search for icing conditions during which it never had bumper protection and had the De-Icers operating during almost half of the ship's total flying time.



**New Fairlead:** Airplane control cables are shown about being served in two types of fairleads. At left, cable goes into the hole with cleavage allowed by a bell-shaped mesh which minimizes friction and wear, newly developed by the Cycle-Weld division of Chrysler. At right, cable is passing through a similar hole of a different type.



Officer M. S. Army Test Pilot

BEECHCRAFT AT-11 BOMBARDIER TRAINER

A bombardier's training is not easy. It demands long days and nights of intensive study and work. That is one reason why American bombardiers have made such excellent scores over enemy targets. Since 1940 most AAF bombardiers, and a large percentage of our country's navigators and pilots as well, have been trained in Beechcrafts. The high regard that these officers have for Beechcrafts is one of our most valued assets.

# Beech Aircraft

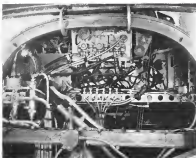
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## Cancellations Curb Fairchild Sales

Production shifts also a factor in decline in shipments for 1944.

Contract cancellations of training planes and engines and shifts in production have prevented continued expansion of sales and shipments in 1944 by Fairchild Engine and Airplane Corp., and they are not expected to equal those of last year.

J. Carlton Ward, Jr., president, indicated that, because of lack of cost experience on products not previously manufactured, it had been considered advisable to take a large proportion of 1944 orders in the form of cost-plus-a-fixed-fee contract.

► **Profit Margins Cut**—Although this has adversely affected profit margins on 1944 business, Ward said, it was the intention of Fairchild to convert its cost-plus-a-fixed-fee contracts to a fixed-price basis as promptly as practicable.

Fairchild directors recently declared a dividend of 20 cents a share common payable Dec. 23, to stock of record Dec. 12. The corporation paid its first dividend of 20 cents a share on Dec. 16, 1943. The dividend declared recently is its second, and in accordance with management policies, reflects the consideration given to the conservation of cash for war production and to meet the uncertainties of post-war financial requirements.

Operations of the corporation include manufacture of airplanes by Fairchild Aircraft Division, aircraft engines by Ranger Division and piston-allywood aircraft components by the Diamond Division. A subsidiary, the Air-Pin Corp., and an affiliate, the Shirok Corp., are engaged in other engineering and mechanical developments.

► **\$25,000,000 Credit Arranged**—Ward announced that Fairchild Engine and Airplane had concluded arrangements for a Regulation V revolving credit of \$25,000,000 with four commercial banks in New York City to meet current needs and those caused by termination of contracts.

Loans under the credit will be guaranteed to the extent of 90 percent by the Army and will bear three percent interest. A commitment fee of one fourth of one percent will be charged on the unused amount of the loan.

All the banks have participated

in previous loans to Fairchild. They are Bankers Trust Co., Chase National Bank, Bank of the Manhattan Co., and Grace National Bank.

## Plan Packard Test Unit at Willow Run

Allocation of \$725,000 for project approved by DPC and additional grant of \$100,000 is now being requested.

Permanent aircraft engine flight testing facilities to be operated by Packard Motor Car Co. at Willow Run Army Air Base will be built under Defense Plant Corp. auspices. DPC has approved allocation of \$725,000 for the project and an additional \$100,000 grant is now being requested. The new buildings will include a large hangar, a three-story engineering laboratory and an attached power plant.

Announcement of the project is believed in informed circles to reflect the Army's intention to maintain the airfield at Willow Run as an Army base and to indicate that the numerous tests of the project will be engineered for standby aircraft production.

► **Ford Program**—Ford Motor Co. has announced it would convert the plant often used for production of farm machinery and has offered DPC \$50,000,000 for the plant, reported to have cost in the neighborhood of \$100,000,000.

Since Packard has announced the new project "need not be considered a temporary Packard operation in the aircraft engine field," it is believed probable that the field will be kept in operation to provide for future emergencies.

The experimental activity of Packard at Willow Run will give that company facilities comparable to those of the large old-line aircraft engine manufacturers.

Packard has been producing Rolls-Royce Merlin engines of original British design. They are used in the North American P-51 Mustang and other warplanes.

► **Plano Engine Development**—Last summer, however, Packard began an aircraft engine development program at the company's Toledo division. This division is developing advanced aircraft engines which will be installed in planes and flight tested at the Willow Run project. The new allocation brings investment in Packard experimental work to \$4,000,000. The company is nearly ready with the new engines is indicated

by disclosure that immediate experimental work will be housed in the Ford Willow Run plant.

The new project, to be built at the main end of the Willow Run field, will include engineering and modification shops for installation of engine mounts and auxiliary equipment such as coolant and fuel systems, photographic facilities to record engine test performance and instrument readings, radio devices for ground-to-air contact with test pilots.

Packard has long been interested in aircraft engine manufacture through its association in production of Liberty engines in the First World War. Before the start of this war it was brought into the liquid-cooled engine production field by license-manufacture of the British Rolls-Royce engine. It has been manufacturing the Merlin, and no disclosure has been made of transfer of facilities to production of the latest model Rolls-Royce Griffon, strengthening the belief of industry circles that the company intends to develop its own types of advanced, liquid-cooled models for war and postwar production.

## Tax Ruling to Speed Contract Settlement

Recent ruling by the Commissioner of Internal Revenue clarifying the tax effect of "no-cost" settlements of terminated fixed-price contracts is expected to speed the settlement of such contracts, in the opinion of government and industry observers.

The Commissioner's ruling brings out the fact that contracts which waive their right to termination compensation have no ascertainable income therefrom and may deduct for Federal tax purposes any related costs or expenses which are allowable as deductions under the Internal Revenue Code. This means the same treatment will be given to these items for recognition purposes to the extent that such items are allowable as expenses of negotiable contracts.

► **Joint Statement**—A joint statement by Secretary of the Navy Forrestal, Under Secretary of War Parsons, Secretary of War Henry H. Lamm, chairman of the U. S. Maritime Commission, and Robert H. Huchley, director of the Office of Contract Settlement, said in part that the Commissioner's statement in such settlements so that a continu-

er is now in a position to decide definitely whether in the light of his particular situation he may utilize the no cost settlement procedure as disposal of his backlog of unsettled terminations.

The no-cost settlement procedure, where appropriate, would simplify the contractor's settlement problems, since it makes unnecessary the preparation and filing of detailed claims.

The joint statement emphasizes the importance for industry and the contracting agencies that the backlog of unsettled terminated war contracts be cleared away before terminations occur on the defeat of either Germany or Japan.

## P & W Schedules Up

Engine manufacturing schedules through 1945 at Pratt & Whitney's Kansas City plant have been revised upward by the Navy Bureau of Aeronautics.

More than 1,300,000 horsepower was shipped last month from the Kansas City plant, compared with more than 1,000,000 in October, Bureau of Aeronautics informed. L. C. Mallett, general manager, said that the plant must jump its peak on additional 250,000 horsepower over previous commitments by November, 1944, and maintain these schedules until the Japs are beaten.

► **4,000 Workers Needed**—Original schedules called for a leveling off in August of 1943. Mallett said at least 4,000 workers must be added to meet new schedules in coming months.



## PRESSURE GAUGE:

Installation of a pressure gauge on the governor pad of the nose apparatus permits quick detection of any block in the system during pre-oiling of engines before their initial start. A correct reading on the gauge assures that all parts are lubricated. The gauge can be installed and removed in a few minutes.

50

10



## SHORTLINES

A new westbound trans-Atlantic record of 11 hours and 36 minutes is claimed by Trans-Canada Air Lines. The flight was made in mid-November between the United Kingdom and Montreal by a Lockheed carrying 6 passengers, 3,500 pounds of mail and 161 pounds of excess in addition to the crew.

National Airlines' application to have its stock listed on the New York Stock Exchange is reported under consideration by exchange officials.

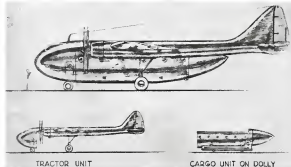
The first two of the C-47's Amer-

ican Report Airlines will operate in trans-Atlantic service under contract with the Air Transport Command have been delivered to the airline's operating base at La Guardia Field to be modified for ferry service. Other deliveries, to complete a fleet of unspooled ones, are in progress. The company has announced that after Jan. 1 it will be as a partner to accept business on its New York-Panama certified route from a broader category of commercial passengers and shippers.

The Meteorological Committee of the Air Transport Association has begun publication of a quarterly Journal of Aeromedical Meteorology,

which will publish articles of interest to pilots, meteorologists and others concerned with the bearing of weather conditions on safe aircraft operation. Volume I, No. 1, contains a foreword by Col. R. A. Gifford, president of ATA, and an editorial entitled "Let's Get Acquainted" by R. J. Munn, TWA's Chief Meteorologist and editor of the journal.

Operating with a load factor of 87.59 percent, National Airlines carried 14,756 passengers in October, an average of 36.75 percent over October, 1943. H. A. Parker, Jr., National's vice-president, announced November passenger miles flown in Oct. 1944 were 14.7 percent higher than the same month last year.



## PCA PROPOSES DEMOUNTABLE CARGO FUSELAGE:

Design for a twin-boom cargo plane, with demountable fuselage to expedite ground handling of freight, has been evolved by Pennsylvania-Central's functional engineering department. Drawing above shows plane, not unlike Fairchild's recently announced C-62 Rocket, ready for flight, and with "boom" and cargo units separated, the latter on a dolly for movement to

the freight terminal. Men in that cargo train could be interchanged with resultant high utilization factor for the tractor unit. Picture below shows terminal action, with components on an endless track carrying cargo between plane, cargo unit and truck or freight car. Murray S. Pack of PCA presented these designs at last week's SAE National Cargo section meeting.



## Airlines Favored In CAA Port Plan

Get lion's share of benefits from improvements proposed under nationwide program.

Air transport stands to receive the lion's share of the airport improvements proposed by the Civil Aeronautics Administration in the comprehensive airport plan presented to Congress last week. A total of \$423,025,513 is recommended by CAA to be allotted to improving fields at presently certificated transport stops and for constructing new airfields at points not now served. This total represents 50.35 percent of the CAA program.

Should the Congress adopt the program as outlined, and translate it into actual construction by adequate appropriations, the transport industry would acquire ready entrance to a passenger and cargo market vastly broader than that now tapped by commercial lines at the 365 points presently certificated to be served.

Regulation — The program sketched by CAA makes ample provision for air transport expansion; not only does it recommend airports at 676 locations now named as possibilities for new routes pending before CAA, but it also suggests installations at 549 "logical ultimate feeder stops."

Improvements to 1,100 existing fields at an estimated cost of \$329,104,661 and construction of 200 new airports of class III or better costing \$233,915,851 are included to reach CAA's total proposed figure of 1,706 airports suitable for commercial traffic.

Fields for military planes—the

report points out that, in addition to providing a comprehensive network of airfields on which to found greatly expanded transport operations, completion of the projected plan ALS would provide a system of auxiliary fields usable by military aircraft.

Both transport and private pilots will welcome CAA's recognition of the necessity of creating separate facilities for these types of aviation in some of the larger metropolitan centers where safety requirements make this desirable.

## ATC Doubles Cargo Carried Over "Hump"

Back in December, 1943, President Roosevelt cited the Indian Claims Division of Air Transport Command for "outstanding performance" in carrying approximately 10,000 tons of cargo across the Himalayas from India to China.

During one recent unnamed month, the Command flew better than 25,000 tons of cargo "over the hump," more than twice as much tonnage being carried as in December, 1943. The record month cargo included aviation gasoline, munitions, trucks, jeeps and other war material.

"Tom Harkin Day"—This fest was marked by a particularly outstanding day designated "Tom Harkin Day" in honor of Brig. Gen. Thomas O. Harkin, who commanded the Hump route until recently. During this single 24-hour period, more than 2,500,000 pounds of vital cargo, better than 1,300 tons were carried over the Hump. In that day, 529 sorties were flown over the route, an average of one Hump crossing every 2.5 minutes.

# WANTED

ENGINEERS  
DESIGNERS  
DRAFTSMEN

Our expanded engineering program has opened positions which are available immediately to men with experience in:

- AIRPLANE DESIGN
- STRESS ANALYSIS
- MAJOR LAYOUT WORK
- MINOR LAYOUT WORK
- DETAILERS
- CHECKERS

These positions offer good working facilities in a modern plant and have excellent opportunities for advancement together with a high degree of permanency for men interested in the private airplane industry. Flying Club facilities are available to those interested in learning to fly and those who wish to continue their present flying activities. The airport facilities are adjacent to the factory.

Application containing complete information on training, experience, and salary desired, should be sent to the attention of Chief Engineer's Office.

Arrangements for Personal Interviews Will Be Gladly Made

AERONCA AIRCRAFT  
CORPORATION  
MIDDLETOWN, OHIO

## Transport's Share of CAA Airports Program

Shown in the table below are estimated costs of airports available to airlines and estimated costs of new airports and facilities available to the transportation system as proposed by the Civil Aeronautics Administration's airport plan.

Location	Improvements				New Construction			
	Total	No. Air.	Estimated Cost	% of Total	Total	No. Air.	Estimated Cost	% of Total
Decertified Sites								
1. Airports	100	55	\$1,200,000	50%	—	—	—	—
2. Airports	100	55	\$1,200,000	50%	—	—	—	—
3. Airports	100	55	\$1,200,000	50%	—	—	—	—
Total	300	165	\$3,600,000	75%	—	—	—	—
4. New Airports	470	470	\$4,000,000	25%	200	200	\$1,600,000	11%
5. New Airports	470	470	\$4,000,000	25%	200	200	\$1,600,000	11%
Total	770	770	\$7,600,000	25%	400	400	\$3,200,000	22%
6. New Airports	1,000	1,000	\$8,000,000	50%	—	—	—	—
7. New Airports	1,000	1,000	\$8,000,000	50%	—	—	—	—
Total	2,000	2,000	\$16,000,000	50%	—	—	—	—
8. New Airports	2,000	2,000	\$16,000,000	50%	—	—	—	—
9. New Airports	2,000	2,000	\$16,000,000	50%	—	—	—	—
Total	4,000	4,000	\$32,000,000	50%	—	—	—	—
10. New Airports	4,000	4,000	\$32,000,000	50%	—	—	—	—
11. New Airports	4,000	4,000	\$32,000,000	50%	—	—	—	—
Total	8,000	8,000	\$64,000,000	50%	—	—	—	—
12. New Airports	8,000	8,000	\$64,000,000	50%	—	—	—	—
13. New Airports	8,000	8,000	\$64,000,000	50%	—	—	—	—
Total	16,000	16,000	\$128,000,000	50%	—	—	—	—
14. New Airports	16,000	16,000	\$128,000,000	50%	—	—	—	—
15. New Airports	16,000	16,000	\$128,000,000	50%	—	—	—	—
Total	32,000	32,000	\$256,000,000	50%	—	—	—	—
16. New Airports	32,000	32,000	\$256,000,000	50%	—	—	—	—
17. New Airports	32,000	32,000	\$256,000,000	50%	—	—	—	—
Total	64,000	64,000	\$512,000,000	50%	—	—	—	—
18. New Airports	64,000	64,000	\$512,000,000	50%	—	—	—	—
19. New Airports	64,000	64,000	\$512,000,000	50%	—	—	—	—
Total	128,000	128,000	\$1,024,000,000	50%	—	—	—	—
20. New Airports	128,000	128,000	\$1,024,000,000	50%	—	—	—	—
21. New Airports	128,000	128,000	\$1,024,000,000	50%	—	—	—	—
Total	256,000	256,000	\$2,048,000,000	50%	—	—	—	—
22. New Airports	256,000	256,000	\$2,048,000,000	50%	—	—	—	—
23. New Airports	256,000	256,000	\$2,048,000,000	50%	—	—	—	—
Total	512,000	512,000	\$4,096,000,000	50%	—	—	—	—
24. New Airports	512,000	512,000	\$4,096,000,000	50%	—	—	—	—
25. New Airports	512,000	512,000	\$4,096,000,000	50%	—	—	—	—
Total	1,024,000	1,024,000	\$8,192,000,000	50%	—	—	—	—
26. New Airports	1,024,000	1,024,000	\$8,192,000,000	50%	—	—	—	—
27. New Airports	1,024,000	1,024,000	\$8,192,000,000	50%	—	—	—	—
Total	2,048,000	2,048,000	\$16,384,000,000	50%	—	—	—	—
28. New Airports	2,048,000	2,048,000	\$16,384,000,000	50%	—	—	—	—
29. New Airports	2,048,000	2,048,000	\$16,384,000,000	50%	—	—	—	—
Total	4,096,000	4,096,000	\$32,768,000,000	50%	—	—	—	—
30. New Airports	4,096,000	4,096,000	\$32,768,000,000	50%	—	—	—	—
31. New Airports	4,096,000	4,096,000	\$32,768,000,000	50%	—	—	—	—
Total	8,192,000	8,192,000	\$65,536,000,000	50%	—	—	—	—
32. New Airports	8,192,000	8,192,000	\$65,536,000,000	50%	—	—	—	—
33. New Airports	8,192,000	8,192,000	\$65,536,000,000	50%	—	—	—	—
Total	16,384,000	16,384,000	\$131,072,000,000	50%	—	—	—	—
34. New Airports	16,384,000	16,384,000	\$131,072,000,000	50%	—	—	—	—
35. New Airports	16,384,000	16,384,000	\$131,072,000,000	50%	—	—	—	—
Total	32,768,000	32,768,000	\$262,144,000,000	50%	—	—	—	—
36. New Airports	32,768,000	32,768,000	\$262,144,000,000	50%	—	—	—	—
37. New Airports	32,768,000	32,768,000	\$262,144,000,000	50%	—	—	—	—
Total	65,536,000	65,536,000	\$524,288,000,000	50%	—	—	—	—
38. New Airports	65,536,000	65,536,000	\$524,288,000,000	50%	—	—	—	—
39. New Airports	65,536,000	65,536,000	\$524,288,000,000	50%	—	—	—	—
Total	131,072,000	131,072,000	\$1,048,576,000,000	50%	—	—	—	—
40. New Airports	131,072,000	131,072,000	\$1,048,576,000,000	50%	—	—	—	—
41. New Airports	131,072,000	131,072,000	\$1,048,576,000,000	50%	—	—	—	—
Total	262,144,000	262,144,000	\$2,097,152,000,000	50%	—	—	—	—
42. New Airports	262,144,000	262,144,000	\$2,097,152,000,000	50%	—	—	—	—
43. New Airports	262,144,000	262,144,000	\$2,097,152,000,000	50%	—	—	—	—
Total	524,288,000	524,288,000	\$4,194,304,000,000	50%	—	—	—	—
44. New Airports	524,288,000	524,288,000	\$4,194,304,000,000	50%	—	—	—	—
45. New Airports	524,288,000	524,288,000	\$4,194,304,000,000	50%	—	—	—	—
Total	1,048,576,000	1,048,576,000	\$8,388,608,000,000	50%	—	—	—	—
46. New Airports	1,048,576,000	1,048,576,000	\$8,388,608,000,000	50%	—	—	—	—
47. New Airports	1,048,576,000	1,048,576,000	\$8,388,608,000,000	50%	—	—	—	—
Total	2,097,152,000	2,097,152,000	\$16,777,216,000,000	50%	—	—	—	—
48. New Airports	2,097,152,000	2,097,152,000	\$16,777,216,000,000	50%	—	—	—	—
49. New Airports	2,097,152,000	2,097,152,000	\$16,777,216,000,000	50%	—	—	—	—
Total	4,194,304,000	4,194,304,000	\$33,554,432,000,000	50%	—	—	—	—
50. New Airports	4,194,304,000	4,194,304,000	\$33,554,432,000,000	50%	—	—	—	—
51. New Airports	4,194,304,000	4,194,304,000	\$33,554,432,000,000	50%	—	—	—	—
Total	8,388,608,000	8,388,608,000	\$67,108,864,000,000	50%	—	—	—	—
52. New Airports	8,388,608,000	8,388,608,000	\$67,108,864,000,000	50%	—	—	—	—
53. New Airports	8,388,608,000	8,388,608,000	\$67,108,864,000,000	50%	—	—	—	—
Total	16,777,216,000	16,777,216,000	\$134,217,728,000,000	50%	—	—	—	—
54. New Airports	16,777,216,000	16,777,216,000	\$134,217,728,000,000	50%	—	—	—	—
55. New Airports	16,777,216,000	16,777,216,000	\$134,217,728,000,000	50%	—	—	—	—
Total	33,554,432,000	33,554,432,000	\$268,435,456,000,000	50%	—	—	—	—
56. New Airports	33,554,432,000	33,554,432,000	\$268,435,456,000,000	50%	—	—	—	—
57. New Airports	33,554,432,000	33,554,432,000	\$268,435,456,000,000	50%	—	—	—	—
Total	67,108,864,000	67,108,864,000	\$536,870,912,000,000	50%	—	—	—	—
58. New Airports	67,108,864,000	67,108,864,000	\$536,870,912,000,000	50%	—	—	—	—
59. New Airports	67,108,864,000	67,108,864,000	\$536,870,912,000,000	50%	—	—	—	—
Total	134,217,728,000	134,217,728,000	\$1,073,741,824,000,000	50%	—	—	—	—
60. New Airports	134,217,728,000	134,217,728,000	\$1,073,741,824,000,000	50%	—	—	—	—
61. New Airports	134,217,728,000	134,217,728,000	\$1,073,741,824,000,000	50%	—	—	—	—
Total	268,435,456,000	268,435,456,000	\$2,147,483,648,000,000	50%	—	—	—	—
62. New Airports	268,435,456,000	268,435,456,000	\$2,147,483,648,000,000	50%	—	—	—	—
63. New Airports	268,435,456,000	268,435,456,000	\$2,147,483,648,000,000	50%	—	—	—	—
Total	536,870,912,000	536,870,912,000	\$4,294,967,296,000,000	50%	—	—	—	—
64. New Airports	536,870,912,000	536,870,912,000	\$4,294,967,296,000,000	50%	—	—	—	—
65. New Airports	536,870,912,000	536,870,912,000	\$4,294,967,296,000,000	50%	—	—	—	—
Total	1,073,741,824,000	1,073,741,824,000	\$8,589,934,592,000,000	50%	—	—	—	—
66. New Airports	1,073,741,824,000	1,073,741,824,000	\$8,589,934,592,000,000	50%	—	—	—	—
67. New Airports	1,073,741,824,000	1,073,741,824,000	\$8,589,934,592,000,000	50%	—	—	—	—
Total	2,147,483,648,000	2,147,483,648,000	\$17,179,869,184,000,000	50%	—	—	—	—
68. New Airports	2,147,483,648,000	2,147,483,648,000	\$17,179,869,184,000,000	50%	—	—	—	—
69. New Airports	2,147,483,648,000	2,147,483,648,000	\$17,179,869,184,000,000	50%	—	—	—	—
Total	4,294,967,296,000	4,294,967,296,000	\$34,359,738,368,000,000	50%	—	—	—	—
70. New Airports	4,294,967,296,000	4,294,967,296,000	\$34,359,738,368,000,000	50%	—	—	—	—
71. New Airports	4,294,967,296,000	4,294,967,296,000	\$34,359,738,368,000,000	50%	—	—	—	—
Total	8,589,934,592,000	8,589,934,592,000	\$68,719,476,736,000,000	50%	—	—	—	—
72. New Airports	8,589,934,592,000	8,589,934,592,000	\$68,719,476,736,000,000	50%	—	—	—	—
73. New Airports	8,589,934,592,000	8,589,934,592,000	\$68,719,476,736,000,000	50%	—	—	—	—
Total	17,179,869,184,000	17,179,869,184,000	\$137,438,953,472,000,000	50%	—	—	—	—
74. New Airports	17,179,869,184,000	17,179,869,184,000	\$137,438,953,472,000,000	50%	—	—	—	—
75. New Airports	17,179,869,184,000	17,179,869,184,000	\$137,438,953,472,000,000	50%	—	—	—	—
Total	34,359,738,368,000	34,359,738,368,000	\$274,877,906,944,000,000	50%	—	—	—	—
76. New Airports	34,359,738,368,000	34,359,738,368,000	\$274,877,906,944,000,000	50%	—	—	—	—
77. New Airports	34,359,738,368,000	34,359,738,368,000	\$274,877,906,944,000,000	50%	—	—	—	—
Total	68,719,476,736,000	68,719,476,736,000	\$549,755,813,888,000,000	50%	—	—	—	—
78. New Airports	68,719,476,736,000	68,719,476,736,000	\$549,755,813,888,000,000	50%	—	—	—	—
79. New Airports	68,719,476,736,000	68,719,476,736,000	\$549,755,813,888,000,000	50%	—	—	—	—
Total	137,438,953,472,000	137,438,953,472,000	\$1,099,511,627,776,000,000	50%	—	—	—	—
80. New Airports	137,438,953,472,000	137,438,953,472,000	\$1,099,511,627,776,000,000	50%	—	—	—	—
81. New Airports	137,438,953,472,000	137,438,953,472,000	\$1,099,511,627,776,000,000	50%	—	—	—	—
Total	274,877,906,944,000	274,877,906,944,000	\$2,199,023,255,552,000,000	50%	—	—	—	—
82. New Airports	274,877,906,944,000	274,877,906,944,000	\$2,199,023,255,552,000,000	50%	—	—	—	—
83. New Airports	274,877,906,944,000	274,877,906,944,000	\$2,199,023,255,552,000,000	50%	—	—	—	—
Total	549,755,813,888,000	549,755,813,888,000	\$4,398,046,511,104,000,000	50%	—	—	—	—
84. New Airports	549,755,813,888,000							

## Pioneer Model Airport

THE surrounding towns of Eldon, Missouri, in making aviation history. It is building its own model airport when other communities several times its size are content with debating gravely whether aviation will be worth some kind of local landing area in the dim, postwar era. Other towns have not reached even this vague discussion stage.

While the idea of a laboratory airport is not new it was advanced editorially by AVIATION NEWS a few months ago, for example—we know of no other community that has overcome its own inertia to the point of breaking ground for such a project. Certainly, the bold choice of local financing in preference to letting back to awestruck government handouts is unique and refreshingly reminiscent of American initiative before Uncle Sam donned his Santa Claus whiskers.

Eldon is at work on a field with two turf landing strips 300 feet wide and 2,000 feet long. Entrance to the airport is five blocks from the Post Office and City Hall. A \$100,000 highway grant is the field. Financing is guaranteed by the city. There will be a small park, a nine-hole golf course, tennis and horseshoe courts, picnic grounds, and trees, shrubbery and lawns. Opening date is set for June.

Outstanding citizens of Eldon, including Mayor Reed, Beaker Collins, Merchant Landerdale, and Movie Owner Edwards, who is also Airport Commissioner, estimate the first cost at \$20,000 with extras for park and golf course, hangar buildings and service.

Eldon is in Central Missouri, with a population about 3,000. But it will serve area leaders are confident that they will continue to draw at least the previous annual average number of more than 100,000 tourists and vacationists to the Lake of the Ozarks, which is only 12 miles away. They believe that thousands more will come by air if given the opportunity.

But this rare populace is not restricting its plans merely to civic welfare and improvement. It is thinking as well about the thousands of other communities in the country whose thinking has not reached this stage of advancement, and it is interested further in contributing to the development of personal aviation.

It has agreed with the Missouri State Department of Resources and Development that it will furnish without cost airport research facilities and records for at least five years. It will maintain a complete record from the site selection to data on property acquisition, development plans, management arrangements, financing, construction, maintenance and operating costs, and revenues. While the State agency under E. V. Fryhoff, head of aviation development, will furnish technical assistance and serve as liaison with the aviation industry, the community will invite aviation manufacturers to install permanent exhibits of hangars, service buildings and various test equipment on the field.

"We are asking the entire aviation industry to participate and cooperate with us in promoting this model airport and to encourage similar airport construction for all communities in the United States," Fryhoff says. "We hope to demonstrate to them that they can have attractive, adequate airport facilities without great expense and that the operation can be on a self-supporting basis."

If aviation does not take advantage on this opportunity and beat a path to Eldon's door, let there begin a maelstrom on speech-making for airports and airports. It is time to go to work. This is the kind of spontaneous, effective leadership we have been waiting for.

## End of The Wasps

HIGH ARMY AIR FORCE officers last week paid tribute to the hard-working Women Aircraft Service Pilots whose organization will be deactivated Dec. 31. AVIATION NEWS joins in the praise for these young women. None denies their industry, and devotion to service. At least 37 have died in training or on duty.

At no time in the Wasps' stormy history was criticism leveled at the women themselves. This fact is frequently twisted. Jacqueline Cochran herself continues to deplore what she contends is prejudice on the part of men against women in aviation. This is silly, and the documentary evidence proves it.

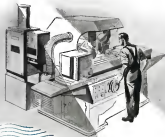
But the entire Wasp project was presented to the public as a military necessity. It was never a military necessity, and the aviation fraternity knew it. A Congressional committee proved it in a painstaking report.

Aviation publications, including the News, deplored the Wasp activation as a costly unnecessary fiasco which had all the earmarks of a Washington deal, apparently designed especially to fulfill some personal ambition in high places. Airmen were never fooled by the press releases. There was never any shortage of men pilots.

Actually, men pilots lost valuable training facilities and flying time because of the Wasps. Wasp training was much more costly, yet comparatively few Wasps ever flew the heaviest aircraft. Hundreds of life-experienced instructors in the War Training Service could have been brought to training levels attained by graduate Wasps in a fraction of the time, and cheaper. The other counts against the formation of the program were clearly stated by the House Committee, and do not need repetition.

Now that they are trained, the Wasps will be welcomed into civilian aviation, which needs everyone who will learn to fly. The Wasps' records in the Army will furnish valuable data about the capabilities of women in flying, yet never were the Wasps presented as a research or experimental group, but under a guise of emergency need which never existed.

ROBERT H. WOOD



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